A Post-Graduate Lecture
ON
INDIGESTION.

DELIVERED AT THE LONDON SCHOOL OF CLINICAL MEDICINE,

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IN selecting "indigestion" as a suitable theme for our consideration this afternoon, I have been determined in my choice by the fact that, though often a symptom of many of the organic disorders which we see together at the bedside, it is also a frequent—perhaps of all others the most frequent—functional disturbance for the alleviation or cure of which our services are requisitioned. It is no exaggeration to say that, whether in hospital or private practice, there is no descriptive answer so frequently given to the first inquiry, "What is the matter?" as this comprehensive word "indigestion." It supplies to the patient a self-satisfying explanation of a wide variety of subjective symptoms, and equally suggests to the physician the greatest of all generalizations for the exercise of his diagnostic and therapeutic acumen.

I need scarcely remind you that though functional indigestion is universally regarded as a trivial affection, it may become one of the most serious detriments to the comfort of life. Neglected or imperfectly treated in its earlier stages, when cure is so often possible, it may prove the forerunner, if not the direct etiological antecedent, of such organic diseases of the stomach itself as catarrh, ulceration, or cancer. It may be associated, whether as cause or effect, with many subsequent intestinal disorders, such as constipation, diarrhoea, colitis, appendicitis, or duodenal ulcer. It is constantly responsible for congestion of the liver, haemorrhoids, and other consequences of disturbance in the portal circulation. Glycosuria may ensue upon it, and unless recognized and properly treated may gravitate into true diabetes. Albuminuria is no uncommon accompaniment, and though functional and intermittent at first may end in true Bright's disease. Phosphaturia, another frequent associate, may pave the way for calculus, cystitis, or pyelitis. The heart often declares its sympathetic association with the digestive disturbance by palpitations, intermittency, or pseudo-angina; while the arteries probably often owe to the presence in the blood of toxaemic products their first departure from health in the direction of arterio-sclerosis. More almost than any other part of the body the delicate nervous system offers a vicarious sacrifice to digestive unrighteousness in the shape of insomnia, vertigo, migraine, neurasthenia, and a whole army of bewildering neuroses. The respiratory apparatus pays its tribute in cough, dyspnoea, asthma, and bronchial catarrh. The skin enters its protest in the form of prurigo, urticaria, or eczema. There is good reason to believe that some forms of arthritis, certain varieties of anaemia, and many uterine and ovarian disturbances are directly sequential to dyspeptic troubles. This constitutes a serious indictment against such an apparently simple condition as indigestion, but it is related in order to emphasize the importance of our subject.

One of the greatest difficulties which most of us have encountered in our endeavours to attain a clear conception of indigestion has arisen from the diversity of views which have been expressed concerning its etiology, the multiplicity of classifications which have been promulgated for its proper understanding, and the hopeless tangle of suggestions which have been made for its dietetic and therapeutic treatment. For a good working scheme which will enable us readily to classify the majority of our cases, and, on the basis of that classification, treat them along well-defined lines of common-sense management, none is better than that proposed by Professor Robin of Paris. It has the superlative merit of simplicity, and confines itself to three divisions which are based upon the physiological functioning of the stomach. There are three ways in which function may be disturbed, namely, by excess, by insufficiency, and by perversity. Indigestion, in its purely functional aspect, may be divided, therefore, conveniently into three varieties, viz., *sthenic*, *asthenic*, and *fermentative*. Such a classification is obviously open to many objections, but so is every artificial division to which any subject is submitted for purposes of description and orderly arrangement.

Each type is applicable to individual cases only in its main features. No two patients are quite alike, and though in their morbid manifestations they come under one or another category of the disorder from which they are suffering, each yet preserves the *ego* sufficiently to stamp the illness with individualistic details. The main features remain prominent enough to determine the type, which is not altered but only modified by idiosyncrasy.

1. *Sthenic Indigestion.*—The sufferer from this variety of indigestion is usually a man of full habit of body who has been accustomed to "do himself well" as regards both food and drink. The discomfort of which he complains is referred to the pit of his stomach. He is quite comfortable for three or four hours after his meal; then he begins to complain of weight and fullness in his epigastrium, waterbrash, sour risings from his stomach, and a desire to empty it of its contents. Should vomiting occur he is temporarily relieved till some hours after the next meal, the story being then repeated. When the stomach still contains a sour residue, food relieves the discomfort by counteracting the excess of acid. At first the attacks of pain are moderate and intermittent, but they increase gradually in severity, and become so constant that the patient, even if ordinarily hungry, is afraid to eat, because, though the first effect of a simple meal is to afford relief, the malaise returns in an accentuated form later on. The pain is of a burning, boring character, and is accompanied, as in other forms of dyspepsia, by flatulence, yawnings, hiccups, and cardiac uneasiness. The patient becomes nervous and irritable; he loses weight, and experiences increasing feebleness and incapacity for his daily work. He is subject to recurring attacks of pyrosis, and he suffers constantly from his throat, which frequently will be found congested and granular. As a rule there is obstinate constipation, and mucous colitis is a frequent complication. With the progress of his malady fermentative discomforts are added to his previous miseries. These are favoured by the physical condition of the stomach, which is usually more or less distended. This distension is probably due to a double cause—first, to enfeeblement of the muscular wall from debilitated innervation; and secondly, to spasm of the pyloric and cardiac sphincters from irritation of the hyperacid gastric contents. The sphincter at the cardiac orifice is more feeble than that at the pyloric orifice; it therefore, as a rule, yields first to intragastric pressure, and permits of a copious eructation of gas by which temporary relief is obtained. If the contents are siphoned off and examined chemically it will be found that they are abnormally acid from the presence of free hydrochloric acid in excess, and of organic acids produced by fermentative processes. There is usually tenderness on pressure over the epigastrium; the tongue may be slightly coated, but is often red and sensitive, pointed at the tip, and with enlarged prominent papillae. The urine, though perhaps scanty, is faintly acid or alkaline, and is deficient in chlorides.

The patient is often of good colour, but if his disorder has been of long duration he may be thin and ill-nourished, and he wears a look of wretchedness, which is unmistakably expressive of mental depression and physical uneasiness.

2. *Asthenic Indigestion.*—This type of indigestion is most commonly met with in young and badly-nourished persons, who have suffered privations from insufficient food, overwork, and mental anxieties, and who have become in consequence anaemic and neurotic. It has not inaptly been called "gastric myasthenia," and appears to depend upon a want of power in the stomach as regards both secretion and contractility. The patient—most frequently a woman—is usually worn, pale, with puffy features and cold extremities. She complains of constant weariedness, shortness of breath on exertion, sleeplessness, and a complete absence of appetite, except for highly seasoned or pungent articles of food. She is never thirsty for ordinary liquids, but always feels the better for tea, alcohol, or other form of stimulant. Her tongue is flabby,

pale, indented by her teeth, and coated; and she complains of a constant bitter, disagreeable taste in her mouth. The gums are pallid and often spongy, and the teeth are frequently decayed and badly looked after. Always after eating she becomes languid and sleepy, gets uncomfortably distended, and experiences an unpleasant flushing of her cheeks and nose. She suffers from a feeling of weight in her stomach, which compels her to loosen her corsets and waistbands, and finds relief in frequent eructations of tasteless and odourless gas. She soon becomes aware that certain articles of diet—tea, pastry, green vegetables, etc.—increase her misery, and, in her search for relief, she often drops one article of diet after another from her daily bill of fare, until nutrition comes to suffer seriously. The influence of strong, coarse tea, which has been allowed to infuse for hours on the hob by the fire, in the causation of this variety of indigestion, is particularly apparent among mill girls, seamstresses, laundresses, and others who are in the habit of drinking this noxious infusion several times a day. The patient is alarmed by the occurrence of palpitation, and is liable, on sudden exertion, to feelings of faintness. Her pulse is soft, small, and feeble. Her skin is inelastic and clammy. Frequently, about an hour after a meal, she vomits the food she has taken, almost unchanged and not strikingly acid, and her comfort is thereby so promoted that she is often induced to produce sickness artificially by putting her finger down her throat. If no vomiting occurs, her discomfort continues for three or four hours, after which she remains free from all symptoms until another meal has been taken. The bowels act irregularly, being at one time constipated and at another relaxed, and, though the whole abdomen is distended with flatulence, it is unusual for the stomach to be dilated to any remarkable extent. There is no pyloric spasm in these cases, and therefore no obstruction to the passage of the gastric contents into the duodenum. None the less, atony of its walls and consequent undue retention of food within its cavity, causes the stomach to sag, and splashing sounds can always be elicited in it during digestion because of these physical conditions. If the stomach contents are examined chemically, the hydrochloric acid is found to be less than normal, but in cases of long standing the organic acids produced by fermentation are present in considerable quantity. The urine continues acid after meals, and is frequently found to contain large quantities of urates. The patient suffers constantly from headaches, vertigo, lassitude, and is apt to become so introspective that she can concentrate her attention upon nothing but her own miseries, from which she feels convinced she will never recover. This form of indigestion is frequently secondary to other ailments, such as pernicious anaemia, Bright's disease, diabetes, gastritis, tuberculosis, heart disease, etc., but in the present connexion we are interested in it only as a primary affection.

3. *Fermentative Indigestion.*—As has been already mentioned, it is extremely rare to meet with indigestion as a consequence of a primary fermentation. When such does occur, its inevitable consequence is to create a gastric irritation, which sets up, according to circumstances, either the sthenic or asthenic type of the disorder. Fermentation is, in the large majority of cases, a superaddition to a pre-existing condition of indigestion. When it ensues upon the sthenic variety of the disorder, we have, in addition to the ordinary manifestations which have been detailed, a greater prominence of three symptoms—giddiness, vomiting, and eructations. The vertigo is extremely distressing and alarming; the vomiting is frequent, the rejected contents of the stomach being unpleasantly sour and offensive; and the eructations are abundant and of a disagreeable odour. The breath is heavy, and the tongue becomes thickly coated with a yellowish pasty fur, which clings to the teeth and roof of the mouth, and produces a constant subjective feeling of a foul taste in the mouth. The appetite, though not banished, is easily appeased, and there is a disinclination to take much food because of the subsequent increase in the vomiting which is sure to follow. If the fermentative processes continue over any length of time, the portal system becomes loaded with the toxic products of food decomposition, and the patient acquires a characteristic muddy complexion, lustreless eyes, icteric conjunctivae, and a somnolent expression, which we are accustomed to associate with a commencing cachexia. Haemorrhoids often occur, and add considerably to the other discomforts. The abdomen becomes distended and tympanitic, and the stomach dilated often to a point below the level of the umbilicus. This abnormally prominent abdomen forms a striking contrast to the rest of the body, which, in many cases of long duration, has become thin. The liver is usually larger than normal, and may be tender when palpated below the costal arch at the end of a deep inspiration. The bowels are obstinately constipated, and the stools are extremely offensive. The urine is always scanty, contains lithates in excess, not uncommonly a haze of albumen, and, in many instances, indican in varying amount. Chemical examination of the gastric contents would reveal an excess of total acidity, the greater portion of which would be found to be due to the products of decomposition, especially of albuminoid materials.

When fermentation ensues upon the asthenic variety of indigestion the same grouping of symptoms—vertigo, vomiting, eructation, etc.,—is met with, but there are certain distinctive features to be borne in mind. The patient complains of a sense of over-fullness after the first few mouthfuls of food and immediately desires to relieve her oppression by loosening her clothes. She has choky sensations and eructations, which cause her to become temporarily purple in the face, and by and by she reaches a state of mental and physical inertia, from which she is often released, an hour or so later, by the regurgitation unchanged of the small quantity of food she has swallowed. She generally suffers from diarrhoea with fetid, frequent stools, both during day and night, accompanied by such urgency of demand for their evacuation that she is unable to risk going any distance from a place of convenience. She has constant headaches, often of the migrainous type, has her sleep disturbed at night by terrifying dreams, and experiences such continuous mental depression that life no longer possesses for her either brightness or hope. She has constant, and often extreme tenderness, over the pit of her stomach, the least pressure against which from without, or the mere contact from within of the blandest and simplest food, is almost certain to provoke a paroxysm of retching, acute epigastric pain, subsequent exhaustion, and not infrequently a terminal hysterical crisis. Chemical analysis of the stomach contents from a case of this type would reveal a condition of superacidity just as in the previous instance, but here it would be found that the carbohydrates had been imperfectly digested and that the fermentative processes had taken place almost altogether at their expense.

All forms of gastric fermentation are due to micro-organisms which inhabit or find their way into the stomach, and though the specific action of any of them as promoters of a special fermentation is uncertain, it would seem that some species have a preference for albuminoids and others for carbohydrates. The conditions which favour fermentation are: Unsuitable or excessive food, imperfect mastication, alcoholic beverages except in physiological amount, undue retention within the stomach of its contents, and abnormal ingestion of micro-organisms with the food or from the alimentary tract. The occurrence of fermentation always aggravates ordinary indigestion; it increases the irritability of the gastric mucous membrane, and readily leads to the establishment of catarrhal or other pathological conditions; it also contributes to the enfeeblement of the stomach wall, and favours dilatation.

These three varieties of indigestion usually remain true, more or less, to type throughout the continuance of the illness, but it occasionally happens that a patient suffering originally from the atonic form of the disease subsequently develops symptoms of its sthenic variety and ultimately presents unequivocal manifestations of fermentative processes. The victim of such a sequence of digestive troubles often takes his food fairly well after having forced himself to make a beginning. His appetite grows with what it feeds upon, and not unfrequently he rises from table without feeling quite satisfied. Within half an hour or so he experiences fullness and weight in the stomach; his face gets hot and flushed, he becomes restless, and cannot settle to read or to do any kind of work; he acquires a sensation of fatigue which tempts him to seek the comfort of an armchair or sofa, where he eventually falls

into an uneasy sleep. If he does not sleep too long he is refreshed and awakes with his local discomfort much improved, but he continues to complain of palpitation, swimminess, flatulent eructations, and regurgitations of mouthfuls of food without taste other than what belongs properly to it, without odour, and without marked acidity. The process is almost one of rumination, but when it is finished a period of complete comfort ensues, during which the ordinary occupations of every day are resumed comfortably. Later on, at from four to six hours after the meal, he gets a recurrence of malaise, ushered in by irrepressible yawning, general lassitude, excessive salivary secretion, and a sense of sinking in the epigastrium. "Hunger pain" is often felt, and cries out for the immediate relief that comes temporarily from any kind of food. It is not infrequently preceded by heartburn. The sense of emptiness at the pit of the stomach, which has not inaptly been described as "hunger pain," is spoken of sometimes as being pathognomonic of duodenal ulcer, but it occurs in many other conditions, and is especially associated with hyperacidity. The discomfort in the stomach sometimes increases to an acute burning sensation, which may radiate to the interscapular space or down into either iliac region or to the hepatic or cardiac areas, and in any of these situations is liable to arouse suspicion of local mischief, and lead to an erroneous diagnosis. The eructation of gas from the stomach or its passage from the intestine brings relief, and this is further increased by the next meal, which is by this time due. The meal being over, there is a repetition of the previous sequence of symptoms. If it happens to be dinner, the patient may go to bed feeling quite comfortable, and may fall into a profound and natural sleep; but in the early hours of the morning—often between two and three o'clock—he is awakened or disturbed by unpleasant nightmares, or violent palpitations, or a sensation of choking, or an extreme irritation of the skin, or a feeling of intolerable heat that compels most of the bedclothes to be thrown aside, and the rest of the night is more or less restless, so that in the morning, when it is time to rise, the man clamours for longer rest, and declares he is more tired than when he went to bed.

What is the explanation of such a succession of events? Under normal circumstances, when food is taken into an empty stomach it excites the activity of the gastric glands, and the acid secretion which they pour out automatically produces closure of the pyloric orifice. The digestive processes act upon the albuminoid elements of the meal and render them fit for assimilation, and in this occurrence the acidity of the chyme is gradually diminished. The pylorus then relaxes and allows the gastric contents to pass on to the duodenum, where their remaining acidity is completely neutralized by the biliary, pancreatic, and intestinal secretions. Roughly, this is the normal process. But in a case of complex indigestion such as we are now considering, the original excitation produced by the entry of food into the stomach is insufficient to call forth an adequate supply of gastric juice, with the result that the food tarries too long in the stomach, as proved by the regurgitations of unchanged aliment which is one of the accompaniments of the condition. The subjective symptoms which characterise this period of gastric inactivity are precisely those which have been recorded as demonstrative of the asthenic form of indigestion. The stomach contents during this time are already undergoing fermentative changes, and are being projected, in this condition, into the duodenum. Coincidentally the gastric juice, which was at first delayed, is now provided superabundantly some hours after the meal, and, mixing with the acid remnant of the previous meal, rapidly converts an asthenic into a sthenic type of disturbance. Unless treatment rapidly remedies the sthenic condition, fermentative changes will increase, and the patient will pass into the ranks of those who suffer from the third variety of the classification we have adopted.

We are now in a position to pass on to the most important problem connected with this disorder—namely, the application of our knowledge to the question of practical treatment. But there are certain leading facts which should be recalled, and some general principles which must be referred to as being applicable to all varieties of indigestion.

The hydrochloric acid which is secreted by the stomach is derived from the chlorides of the blood, which are split up so as to leave the alkaline element behind. During active digestion, therefore, both the blood and the urine become more alkaline than during the intervals when the gastric functions are in repose. When gastric juice is not secreted in sufficient amount, the urine remains acid after meals, and there is a more or less complete absence of the normal "alkaline tide."

During normal digestion certain fermentative processes go on in the stomach without producing symptoms of any kind; but when there is either an insufficient secretion of hydrochloric acid, or an abnormal delay of food in the stomach, fermentative decomposition becomes excessive and pathological.

The discharge of the stomach contents through the pylorus is not constant, but takes place by intermittent jets. The time which the food takes to leave the stomach can be ascertained by the administration of a fifteen grain dose of salol. This substance does not undergo any change in an acid medium, but in alkaline surroundings it splits up, at the ordinary temperature of the body, into phenol and salicylic acid. The presence of the latter is readily determined in the urine by the addition of a neutral solution of ferric chloride. Though the time of its appearance is subject to considerable variation, the reaction may be expected to declare itself, when the condition of the digestive organs is normal, within the limits of from forty-five to seventy-five minutes after the salol is taken.

The absorptive power of the gastric mucous membrane can be tested by means of potassium iodide. If three or four grains of this salt be given in a capsule it will be possible, in a normal state of the stomach, to determine its presence in the saliva in from ten to fifteen minutes after the capsule has been swallowed. Filter-paper soaked in a solution of starch is moistened from time to time with saliva and then touched with fuming nitric acid. Whenever iodine is present in the saliva the filter-paper, at the point of this contact, will turn blue. According to Ewald, if absorption is delayed until one or more hours after eating, it is pathological.

The imperfect comminution of the food by undue hurry over meals, or by decay or absence of teeth, is frequently the starting point of digestive troubles. Carious teeth form admirable breeding grounds for microbes of all sorts, which readily and continually find their way from the mouth to the stomach, where they rapidly set up lactic acid and butyric acid fermentations should hydrochloric acid be at all deficient in amount.

Heredity has an important bearing upon the etiology of indigestion. Certain families throughout many generations give a history of dyspeptic disorders in many of their members, and it is noteworthy that a gouty ancestry generally connotes a likelihood of sthenic indigestion, whereas a neurotic and anaemic inheritance is associated with the asthenic type of stomach disorder.

Appetite is powerfully influenced by the state of the portal circulation; the desire for or dislike of food is therefore largely dependent upon the condition of the liver. Speaking generally, appetite is increased in sthenic and diminished in asthenic cases. Lauder Brunton says that "a lack of appetite, restored by eating, indicates an atony of the stomach which is likely to be benefited by tonics and stimulants; a craving appetite, easily satisfied, or anorexia with a tendency to nausea in eating, indicates irritation and requires sedative treatment."

Pyrosis, which is a leading symptom in the sthenic variety of indigestion, is the result of reflex activity of the salivary glands from some form of stomach irritability, of which excessive acidity is the most common. There seems to be an appeal on the part of Nature for sufficient of the alkaline saliva to neutralize this hyperacidity and cure the sensation of heartburn produced by the contact of acrid fluids with the lower end of the oesophagus, whose mucous membrane is much more sensitive than that of the stomach itself.

Flatulent discomforts are caused both by active fermentation and by the swallowing of air.

When indican is found in the urine its presence is to be regarded as evidence of albuminous decomposition, and in cases of indigestion this is most frequently the result of putrefactive changes in the small intestine.

An acute form of indigestion is encountered either in people of gouty habit or in those who have eaten an unsuitable and excessive meal. Pain and discomfort some hours after the meal announce that the stomach is unfit to overtake its duty, and the condition is usually relieved by active vomiting. If the fermenting contents of the stomach have been retained long enough to produce a mild toxaemia, some days may be required for complete recovery.

Motor insufficiency of the stomach may be recognized by splashing of the gastric contents on shaking the patient. This splashing sound is not of itself a morbid symptom; it only becomes so if it is persistent and is confirmed by other physical signs.

For its successful treatment indigestion requires care and judgement on the part of the physician and obedience and perseverance on the part of the patient. No two cases can be treated exactly alike, because there is no disorder in which so much attention to idiosyncrasy is necessary, especially in matters of diet. Dietetic rules are none the less necessary both to correct habits of imprudence that may have been formed, and also to educate the dyspeptic patient to a disciplinary routine which experience proves to be requisite for the maintenance of a proper balance between his intake of food and his capacity for digesting it.

With the reservation, then, that the following suggestions are to be regarded in the light of general principles only, let us consider first the procedure to be adopted in cases of:

1. *Sthenic Indigestion.*—Treatment of this variety of indigestion must be essentially sedative, both as regards medicine and food. It must also aim at counteracting the hyperacidity, which is the principal disturbing factor in the illness. The patient should give himself as much rest, both mental and physical, as he can conveniently command. He should have long nights in bed, observe the greatest regularity and moderation in regard to his meals, take a suitable amount of daily exercise in the open air, and indulge in a comfortably warm bath with subsequent active towelling every morning before breakfast. A Turkish bath once a week, if taken with due regard to individual requirements, followed by the use of a flesh brush, vigorous massage, and spirit rubbing, is a helpful addition to other treatment. In some cases it is a good plan to restrict the diet for the first three days entirely to milk. If your patient can be induced for these three days to remain quietly at home and to live wholly upon milk and Vichy water—two parts of the former to one of the latter—in quantities of 6 oz., taken every two hours, he will establish an excellent foundation upon which to build up successfully his subsequent treatment. In many cases it will be found that the addition to each pint of milk of from 20 to 30 grains of citrate of soda makes it more easy of digestion. Peptonization is unnecessary. Passing from this preliminary and drastic restriction, his meals afterwards should be arranged on the following plan: In the early morning a tumblerful of water as hot as can be borne, to which has been added half a teaspoonful of bicarbonate of potash, to be slowly sipped; for breakfast, oatmeal porridge or quaker oats with cream, hot milk and water without sugar, toasted bread or rusks and butter, and one egg, boiled, poached, or scrambled. For luncheon, chicken, game, tripe, or calf's-head; purée of vegetables; fresh fruit, cooked with glycerine or saccharin, and cream; biscuit, or toast, with butter and cheese; an alkaline table water. In the afternoon cocoa made from the nibs, dry toast, and butter. For dinner, clear soup, white fish, boiled or grilled, without rich sauce; pâté of macaroni, rice, vermicelli, etc.; a course consisting of a freshly-cooked vegetable in season, with melted butter; a simple omelette or pancake, with compôte of fruit, unsweetened; one to two ounces of well matured whisky or brandy in one of the alkaline table waters. Fluids should be reserved for the end of the meal, bread should be taken in small amount and toasted, salt ought to be indulged in sparingly, and after luncheon an hour's complete rest is desirable. Medicinally, each meal should be preceded by some such sedative mixture as the following: Tincture of belladonna and tincture of opium, of each 10 minims, liquid extract of ergot 15 minims, spirits of peppermint to 1 drachm; to be taken in two tablespoonfuls of water a quarter of an hour before the meal. This combination of drugs controls the glandular secretion of the stomach and diminishes the excitability of the mucous membrane. It does not, however, prevent hyperacidity later on, and therefore it is desirable to deal with this by ordering the following powder to be given immediately after the first sensation of epigastric discomfort declares itself: Magnesium carbonate, sodium bicarbonate, and bismuth carbonate, of each 20 grains; Dover's powder, 3 grains; to be mixed in Vichy or other mineral water and taken after meals as directed, with a second powder an hour later if the discomfort persists. The liver should be stimulated and the bowels kept in order by an occasional mild antibilious pill. Constipation should be corrected by a sufficient dose of Carlsbad salts taken in the morning tumblerful of hot water. After the stomach symptoms are controlled it is often desirable to establish a better tone of the nervous system by a suitable tonic.

2. *Asthenic Indigestion.*—In the treatment of asthenic cases the object to be achieved is stimulation of the feeble gastric functions, bearing in mind that both secretory and motor power are at fault.

As regards food, it is a point of importance to remember that, in contradistinction to sthenic cases, milk should be given at first sparingly, because it tends to diminish gastric secretion; it also delays hepatic activity and induces constipation. The following arrangement of food will suit many cases: In the early morning a tumblerful of hot water, to which a thick slice of fresh lemon has been added, to be sipped slowly; for breakfast, weak tea or coffee, sweetened with saxin, toasted bread and butter, bacon and egg, cold ham, or white fish; during the forenoon a small cupful of meat jelly with a finger of toast; for luncheon, freshly cooked red meat thoroughly minced or pounded, and, in small quantity, purée of vegetables, milk pudding, biscuit and cheese; one claretglassful of an infusion of malt, prepared according to Robert's formula; in the afternoon, cocoa, biscuit or toast spread with butter, and Liebig's extract of meat, or with raw-meat pulp; for dinner, white fish, chicken or game, mashed potato or other cooked vegetable, stewed fruit or omelette, one glass of Burgundy, claret, or wood port wine; at bedtime, one teacupful of Benger's food, to which has been added one dessertspoonful of brandy. Bread should be taken sparingly, and must always be stale or toasted; condiments such as pepper, mustard, chutney, Worcester sauce, etc., may be allowed, to stimulate the appetite; ammonium chloride should replace common salt; a short rest after the principal meals is desirable; residence in the country rather than the town; moderate exercise in the open air; a morning warm bath, followed by a cold douche to the spine while still standing in the hot water, with subsequent vigorous towelling; and superficial massage over the stomach for ten minutes before going to bed at night. As regards medicines, each meal should be preceded by a simple bitter alkaline mixture, such as the following: Potassium bicarbonate 15 grains, tincture of nux vomica 10 minims, tincture of capsicum 5 minims, compound infusion of gentian to 1 oz. Should epigastric discomfort ensue in the early days of treatment after a meal, one of the powders suggested for sthenic cases should be taken at once. The bowels, when constipated, as they usually are, should be regulated by a simple pill taken every evening before dinner. A useful combination will be found in leptandrin 1 grain, aloin $\frac{1}{4}$ grain, powdered ipecacuanha and extract of belladonna, of each $\frac{1}{4}$ grain, extract of rhubarb 2 grains. After we have succeeded by these methods in stimulating the gastric functions to such activity that the subjective symptoms are controlled, the alkaline bitter mixture before food should be replaced by tonic medication so arranged as to assist Nature's efforts until stability of function is restored and the general tone improved. For this purpose such a prescription as either of the following may be ordered: (*a*) Dilute hydrochloric acid 15 minims, pure carbolic acid 2 grains, strychnine solution 5 minims, tincture of ginger 15 minims, infusion of calumba to 1 oz. To be taken three times a day, one hour after meals. (*b*) Finkler's papain 2 grains, pure carbolic acid 2 grains, strychnine $\frac{1}{30}$ grain, extract of cannabis indica $\frac{1}{4}$ grain, and extract of taraxacum 2 grains; to be dispensed in a capsule and taken after meals three times a day.

3. *Fermentative Indigestion.*—As has been pointed out, this form of indigestion is most frequently a sequel to the sthenic or asthenic varieties of the disorder. Its proper

management consists in supplying an aliment as little fermentable as possible; in preventing prolonged accumulation of food in the stomach; in promoting normal gastric activity; and in the administration of suitable antiseptics.

It is of first importance to ascertain whether the fermentative processes are mostly concerned with the albuminoid or with the carbohydrate constituents of the daily menu—whether, in short, the preceding type of indigestion has been of the sthenic or of the asthenic variety. The diet being arranged on a plan to meet the one or the other of these indications, ought to have, as an addition to luncheon, sour-milk cheese, which should be thickly spread on toast or biscuit and taken at the end of the meal. There are endless lactic acid preparations, but one of the best and most reliable is sold under the trade name of "Uga." It is supplied in small squares, one of which should be consumed in three or four days.

The next point of importance is to deal with the distension of the stomach from undue retention of the food which all fermentative cases present. There are two methods by which this fault can be overcome: either by the administration of emetics or by the practice of lavage. On the whole, it will perhaps be found that the best results are obtained by a combination of these plans. Despite its unpleasantness, there can be no doubt that the old-fashioned system of clearing the stomach by 15 grains of ipecacuanha, 30 grains of sulphate of zinc, or $\frac{1}{5}$ grain of apomorphine given hypodermically has much to commend it. The effect is not only to empty the stomach thoroughly, but also to stimulate its contractile power, and to counteract the tendency to pyloric spasm. When resorted to, the emetic should be administered first thing in the morning, and repeated every alternate day for three doses. If this does not succeed in affording relief and improving the tonicity of the stomach wall, it is then desirable to wash out the stomach every morning for a week or ten days with a mild alkaline solution, taking care that the lavage is carried out so effectually as to ensure the removal of every particle of fermenting food which the viscus contains.

As regards drugs, it is in this variety of indigestion that antiseptics find their greatest value; they may be given either in acid or in alkaline media, according to the requirements of the case. For acid mixtures pure carbolic acid in 2-grain doses, and for alkaline mixtures sulphocarbolate of soda in 15-grain doses, will be found extremely serviceable.

Examples of carbolic acid combinations have already been quoted in dealing with the later treatment of asthenic cases.

Constipation is the rule in these cases, and must always be corrected by simple aperients in combination with calomel. In cases that prove very rebellious it is often helpful to rest the stomach entirely for forty-eight hours. During this time of fasting the patient's nutrition can be satisfactorily maintained by nutritive enemata given every six hours. A suitable enema can be prepared in this way: The yolk of 1 egg, Carnrick's peptonoids 1 oz., glucose $\frac{1}{2}$ oz., chloride of sodium $\frac{1}{2}$ eggspoonful, peptonized milk to 6 oz.; to be made comfortably warm and slowly introduced into the bowel by a soft rubber tube and funnel.

The prescriptions which are here suggested must obviously be subject to modification according to the requirements of each case, and are to be accepted only as examples of drug combinations that have been, in my own experience, useful.

The complications which may attend indigestion have not been referred to; they are many, and require to be treated on general principles as they arise.

A VOLUME has been issued giving an account of the proceedings of the Association Médicale Internationale contre la Guerre since the date of its foundation up to its annual meeting last year. The body is one which was brought into existence mainly through the energies of Dr. J. Rivière during the Russo-Japanese war, and has for object the bringing to bear the influence of its medical adherents for the suppression of warfare. The next general meeting of the association is to be held in Paris in September. Information regarding it can be obtained from its President, Dr. J. Rivière, 25, Rue des Mathurins, Paris.

Remarks
ON
HOUR-GLASS CONTRACTION OF THE STOMACH.

By R. P. ROWLANDS, M.S., F.R.C.S.,
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HOUR-GLASS contraction of the stomach is said to be a very rare disease, but it is probably not so rare as it is supposed to be, for I have operated upon six patients who were suffering from it during the last three years. The narrowing was due to the contraction of a simple ulcer in five, but carcinoma had been grafted upon simple ulcer in the sixth case. The condition would not have been recognized in at least three of these without the aid of the bismuth and *x*-ray method of examination. No operation would have been performed, and the patients, who are now living and well, would have died unrelieved with their condition unrecognized. Twice a diagnosis of late carcinoma had been made, and a hopeless prognosis had been given. The bismuth method undoubtedly affords the most reliable means of diagnosis of hour-glass contraction, and it ought to be used more frequently. Five of the patients were extremely ill at the time of operation, and had been invalids for many years. Earlier diagnosis and treatment would have saved them much pain and misery. It is even possible that malignant disease would have been prevented in the sixth case. All the patients fortunately recovered from the operation, and they are now in fair but not robust health. The patient with malignant disease, although greatly relieved, is of course only better for a time. Early operation not only lowers the mortality, but makes the restoration of health more complete. The mortality of recorded operations for hour-glass contraction is high, therefore the recovery of these patients, in spite of very grave conditions, is gratifying, and is chiefly due to recent improvements in technique, and in the treatment of patients before and after operation. In most cases gastro-gastrostomy is the most suitable operation, but in two of these patients pyloric stenosis had to be relieved at the same time. For this gastro-duodenostomy, after Finney's method, was easily done and was efficacious. On account of the interest of the condition, a detailed account of the six cases will now be given, and this will be followed by a short discussion of the pathology, diagnosis, and treatment of hour-glass contraction.

CASE I.

Mrs. M. D., an American lady aged 42, was brought to me by Dr. J. C. Cook towards the end of October, 1909.

History.

She gave a history of lifelong constipation and indigestion. About ten years ago she began to have attacks of biliary colic about once or twice a year, but these entirely ceased four years ago. She has never been jaundiced. Since she was a girl she has suffered a great deal from indigestion. For the last three years she has had almost constantly a dull pain in the epigastrium, but this has become a great deal worse within the last few months, and has lately shifted up the sternum as high as the sternal notch, where it is sometimes very severe, especially when the patient swallows. The indigestion has been very bad during the last eighteen months. At first she used to vomit about once or twice a week, but gradually this has increased in frequency to once every day, and lately after every meal containing any solid. She has never had haematemesis or noticed melaena. Gradually the amount that she can swallow at a time has diminished. After the food she has a feeling of a lump in the throat and under the breast-bone. For months she has not been able to take solid food in comfort. The attempt has always been followed by great pain, which is only relieved by the return of all the food. One day she took an oyster divided into four pieces; this was followed by great pain and vomiting, which was only relieved when the last piece of oyster was returned four hours later. The only solid that she could occasionally take in comfort was a Welsh rarebit. Occasionally her mouth fills with water, and then she brings up a small amount of mucus. The act of swallowing itself is not painful if the patient is content with a small amount of liquid at a meal. For the last year she has not been able to take tea. For months she has lived on peptonized milk, Benger's food, Brand's essence, and so on, in decreasing quantities at a time. These have been supplemented by nutrient enemata and suppositories. She has wasted progressively for two years, but much more

rapidly during the last six months. About two years ago her weight was 130 lb.; now she is only 56 lb., although she is 5 ft. 9 in. in height. During the last few months she has had several attacks of shivering, associated with exacerbation of vomiting. In spite of all this the patient has led an active life, often travelling 200 miles a day in her motor car and managing the business affairs of her daughter. She was taken to see a well known consulting physician in May, 1909, who is said to have diagnosed malignant disease in the abdomen, possibly in the stomach or pancreas. He gave a bad prognosis, and advised that the patient should be allowed to live and do as she liked.

Condition upon Examination.

The patient was extremely thin and feeble (Fig. 1). She was only able to walk into my consulting-room with difficulty. She was not able to dress or undress herself. Her skin was yellow, dry, and wrinkled. The temperature was 97°. The hands and feet were cold. There was some oedema of the ankles.

Fig. 1.—Case 1: A month before operation. She was thinner at the operation. She weighed 56 lb.

Alimentary System.—All the natural teeth were missing, having been extracted about fifteen years ago and replaced by complete sets of artificial teeth. The tongue was raw and red. When asked to swallow a glass of milk she was only able to take half a tumblerful in small sips. Any attempt to take more gave rise to pain and a feeling of distension at the lower end of the sternum. The abdomen was carinated, and in spite of the fact that the abdominal wall was very thin, no tumour could be felt anywhere in the abdomen. There was a little resistance in the gall-bladder region, but no dullness or tumour. A succussion splash could be obtained a little below the level of the umbilicus. A pelvic examination revealed no abnormality. The respiratory system was normal, in spite of a history of possible phthisis at the lower part of the right upper lobe. The nervous system was normal except for great irritability of temper. In view of the difficulty of diagnosis between oesophageal stricture and hour-glass contraction of the stomach with pyloric obstruction, an *x*-ray and bismuth examination of the stomach was advised. Three days later the patient was asked to swallow a tumblerful of milk containing 1 oz. of the oxychloride of bismuth. After much coaxing she was only able to swallow half this amount. She was then placed standing before the *x*-ray apparatus. It was at once seen that the oesophagus was not distended, so that the obstruction could not be in it. A small shadow was seen just below the diaphragm, and from the right border of this a narrow streak of bismuth extended into a lower shadow, giving the characteristic appearance of hour-glass stomach, with an unusually small cardiac pouch (Fig. 2). As the patient swallowed more bismuth the lower shadow gradually increased until it was much larger than the upper one. It extended from 2 inches below the umbilicus to a little below the symphysis pubis. The fluid took a long time to run away from the upper sac, so that the obstruction was evidently severe. The size of the pyloric pouch and the delay in the exit from the stomach made it clear that there must be pyloric obstruction as well. An operation was advised and the patient consented. The next day was spent in preparation. The patient was given nothing but sterilized milk and boiled water by the mouth and nutrient enemata and salines were also administered alternately every four hours. This improved the pulse and the general condition of the patient to a great extent. The false teeth were taken away and the mouth thoroughly cleansed several times a day with an antiseptic mouth wash.

Fig. 2.—Case 1: Hour-glass contraction and pyloric stenosis. Bismuth shadows. Note unusually small size and high position of the cardiac shadow above and to the left of the umbilicus o, The pyloric shadow was partly behind the pubis, and took some time, and repeated swallowing of small amounts, to reach the size indicated.

Operation.

On the morning of the second day after the examination Dr. Page gave an anaesthetic, and the abdomen was opened through an incision made as high as possible in the left rectus muscle, some of the fibres of which were cut across in order to give more room. The stomach was explored and the conditions suggested by the *x* rays were discovered. The upper pouch was very small, being about the size of an ordinary hen's egg. The lower pouch was fairly large, being about the size of a normal stomach. The pylorus was considerably narrowed, but fairly movable. The scar of a healed ulcer was seen upon its anterior surface. The constriction in the stomach was very hard and tight. There was not enough thickening of the wall to suggest carcinoma, nor were there any signs of any enlarged glands in the small or large omentum or pancreas. The stricture was 3 in. long and appeared to be due to the healing of a large saddle-shaped ulcer occupying the lesser curvature quite close to the oesophagus and extending far downwards upon both the anterior and posterior walls of the stomach. The lower part of the stomach was pulled downwards and to the right so as to bring the cardiac pouch into view. For reasons that will be presently discussed, a gastro-gastrostomy was decided upon. It was found to be impossible to control the cardiac pouch with clamps without passing one blade through the gastro-colic omentum into the lesser sac of the peritoneum and upwards behind the stomach towards the oesophagus. The other blade was placed in front of the stomach and the lesser omentum, and the forceps were locked and closed. Another long clamp was applied on the anterior wall of the pyloric pouch near the greater curvature, and with its points directed upwards and to the left. The clamped portions of the stomach were then carefully isolated with moist packs, and they were joined together by two layers of direct sutures, just as in gastro-jejunostomy. Linen thread was the suture material used. The opening in the cardiac pouch extended from the lower and right border upwards, and to the left of and above the oesophageal orifice (Fig. 3). This was the only way to make it long enough. The wall was extremely thick and hard. The mucous membrane was inflamed and closely adherent to the other coats, so that none of it could be removed separately. Therefore an ellipse of the whole thickness of the fibrous wall was removed. It was impossible for the through-and-through suture to pick up the mucous membrane all the way round without unduly narrowing the anastomotic opening; but the other coats were so extremely fibroid that there did not appear to be any danger of the stitches cutting out. The external seromuscular suture having been completed, tags of the lesser and gastro-colic omenta were fixed over the suture line. The pylorus was then brought into the wound, and an incision was made along its supple lower border and prolonged into the lower borders of the duodenum and stomach, which were close together. The wound was closed after Finney's method of gastro-duodenostomy, but with continued instead of interrupted sutures. Before the opening was made, clamps were applied to prevent leakage and haemorrhage. The gall bladder was found to be full of stones, but it was neither inflamed nor adherent, and the cystic duct was patent. There was no indication for removing the stones, especially as any prolongation of the operation would probably have resulted fatally. Moreover, the gall stones had given rise to no symptoms for five years. When the operation was completed the stomach seemed to be about the normal size and shape. The new pylorus was very wide. The gastro-gastrostomy had drawn the pyloric pouch upwards and to the left. The abdomen was closed in layers, the opera-

Fig. 3.—Case 1: The cardiac and pyloric pouches were anastomosed, A, *a* and B, *b* being joined together respectively. The constricted pylorus *p* was greatly enlarged after Finney's method. The incision along its lower border is shown extending into the duodenum and stomach. The edges were sewn together in such a way as to enlarge the pylorus without tension 1 to 2 and 3 to 4.

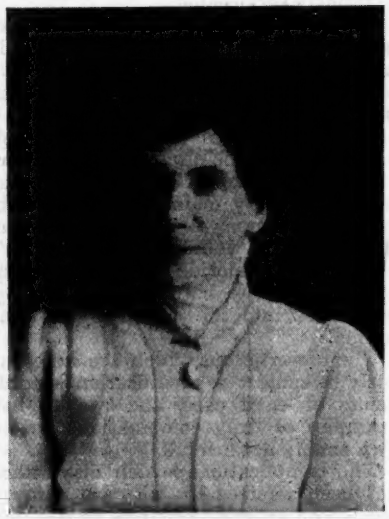

Fig. 4.—Case 1: Four months after the operation. She is now much fatter. She weighed 104 lb.

tion being completed in forty-five minutes. A saline enema was given immediately on the return of the patient to bed. The patient was rather collapsed for the first two days. She was given water to drink from the first, and saline and nutrient enemata were administered alternately every four hours. The mouth was exceedingly dry and thirst was very severe. Towards the end of the second day milk was given by the mouth, and from that time onwards nutrients were discontinued. The food given by the mouth was gradually increased so that at the end of fifteen days she was on minced full diet. Gradually the patient became able to swallow larger amounts at a time. She left the home after five weeks with her condition very much improved, having gained over a stone in weight (Fig. 4). She was last seen at the end of September, 1910. She was then very well and looked years younger. She weighed 7 st. 10 lb., having gained 3 st. 10 lb. since the operation about a year ago. She was said to be well at Christmas, 1910.

CASE II.

H. B., a married woman aged 40, was admitted into Guy's Hospital under my care on March 17th, 1909. She was sent to me by Dr. J. E. Hancock of Hurst Green, Sussex, for recurrent attacks of abdominal pain and vomiting. The following is the report of my ward clerk, Mr. Samuel: The patient had always been pretty strong and healthy as a young girl, but about twenty-two years ago, whilst in service in London, she was suddenly attacked with violent pains in the stomach accompanied by vomiting. She was attended by a doctor, who told her that she had an ulcerated stomach, and that this condition had been brought about by the dampness of the bed in which she had been sleeping. She was admitted to Hastings Hospital for her condition, and, after being detained there for a few weeks, she was discharged much better. Since then she has had repeated attacks, which vary in duration from days to months and the intervals between which vary from days to years. The patient has been married for fourteen years, and from about two years prior to that time she has been almost continually a victim to gastric troubles. About fifteen years ago she was in Charing Cross Hospital for the same trouble, and was treated there by means of rest and dieting for some weeks before being discharged much better. The pains, which are usually extremely acute, are situated in the pit of the stomach, and usually shoot into the right shoulder blade, and sometimes into both shoulder blades, but never into the left without the right being implicated, and when both shoulder blades are affected the right is always worse than the left. Occasionally the pain is in the shoulder blade but not in the stomach, and vice versa. During the attacks of pain there is usually much vomiting, and this, like the pain, is much worse after the patient has exerted herself in any way, and is sometimes worse after meals. Occasionally she brings up a little blood when vomiting. Lately she has vomited about three or four times a day without definite relation to food. During the attacks she is constipated, but she attributes this to the low diet which she usually follows when she is ill. In the intervals between the attacks of pain the bowels are always quite free, but certain foods such as cheese, meat, tea, etc., and violent forms of exertion, soon bring on the attacks again. The last attack began in November, 1908, and has lasted ever since. For the past month she has been practically living on nothing else but milk and arrowroot, but still she gets no relief. The pain has been very great, and the patient has begun to feel very weak. She sleeps very badly. Since November the patient has lost flesh, has had no appetite, and has felt very ill in herself.

Condition on Admission.

The patient is extremely thin and sallow. She is always cold, especially in her extremities, and she is very irritable in temper. The tongue is swollen and raw. The patient suffers very much from thirst. The abdominal wall is tender on pressure, and the recti muscles seem somewhat rigid in the upper parts. There is nothing else abnormal to be felt. The teeth are in a horrible condition. The lower incisors form the seat of very bad pyorrhoea alveolaris. There are many carious teeth and several septic roots present in the mouth, whilst the gums are spongy and hyperaemic. She is to have dental treatment and diet, and is to be kept under observation. On March 18th Dr. Morton kindly examined the patient with the *x* rays, and sent the following report:

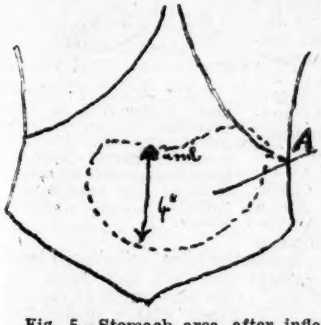

Fig. 5.—Stomach area after inflation with CO_2—that is, dilated and dropped, but no sign of being bilocular. Possibly a second division might be at the fundus, but there was no delay in filling up of pyloric pouch.

"Examination after bismuth showed the bismuth retained in the upper part of the stomach (cardiac end) for several minutes. The bismuth gradually passed down to 3 in. below the umbilicus and collected there. Small streaks of bismuth could be seen passing between the two places, but the two were never actually united. There is active peristalsis of the cardiac end. After air injection there was no definite shadow of any neoplasm, and the condition appears to be one of hour-glass contraction."

Dr. Hertz kindly examined the patient in various ways and reported as follows:

"Stomach area, after inflation with CO_2 i.s., dilated and dropped, but shows no sign of being bilocular. (Fig. 5.) Possibly a second division might be at the fundus, but there was no delay in filling up the pyloric pouch. After a bismuth meal the food passed slowly through the narrow constriction into the pyloric pouch, which is dilated and low, as shown by the CO_2 inflation. (Fig. 6.) The examination was in the vertical position, when the cardiac pouch extended below the neck leading to the pyloric pouch. On washing the stomach out three and a half hours after the test meal, there was no food residue. A fair amount was found on a second occasion after one hour and twenty minutes. Hence there is no constriction sufficient to produce stasis of food. Of 5¾ pints run in, 4 pints could be withdrawn. On the second occasion it appeared as if most food was in the lower division, as the water returned almost clean when the tube was introduced a short distance, but turbid and blood-stained when introduced any further.

Fig. 6.—Bismuth shadows. A, Cardiac pouch. B, Constriction. C, Pyloric pouch. D, Umbilicus.

Operation.

On April 1st, 1909, the patient was anaesthetized, and the abdomen was opened through the upper part of the left rectus muscle. The left costal margin was retracted. The stomach was examined and found to be hour-glass in shape, due to a very large saddle-shaped ulcer on the lesser curvature near the oesophageal orifice, and extending on to the anterior and posterior walls. Contraction of this ulcer had greatly narrowed the stomach at this point, the lower border being drawn up in a striking manner. The pyloric pouch was the larger, and was joined to a smaller cardiac pouch by a narrow constriction. The ulcer was extensively adherent to the under surface of the liver, which it had deeply eroded. The pylorus and duodenum were healthy. Gastro-gastrostomy was decided upon because the cardiac pouch was so fixed high up under the ribs as to make posterior gastro-jejunostomy very difficult. Gastroplasty was not chosen owing to the depth at which the sewing would have to be done. Moreover the incision would extend into the thick-walled ulcer, making the suturing difficult and risky. About 4 in. of the anterior wall of each gastric pouch near the greater curvature was clamped obliquely on each side of the constriction. The points of the strong clamps were directed upwards and to the left. After carefully packing with moist gauze, the clamped portions of stomach were joined together by means of two continuous silk sutures, one piercing all the walls and the other only the serous and muscular coats. Elliptical pieces of mucous membrane were removed. The opening was 3½ in. long. A few more sero-muscular sutures were used at intervals round the anastomosis for greater security. After mopping with moist gauze, the packs were removed, and the abdomen was closed in layers, catgut being used for the peritoneum and the rectus sheath, and salmon-gut for the skin, superficial and deep fascia. The wound was then dressed aseptically. The operation lasted thirty-five minutes. Soon after the operation the patient was given water to drink, and a rectal saline was also administered. She vomited three times after the operation, bringing up a little brown fluid which contained blood. Otherwise her recovery was uninterrupted. The wound healed perfectly. The temperature was normal throughout. The diet was gradually increased. She rapidly put on weight, and left the hospital on April 20th, just three weeks after the operation. The food was minced, because the patient had no teeth. When she went home her food was also minced, and as far as possible the diet was restricted for the same reason. In spite of this she put on weight, and rapidly improved in general health. About six months later she was able to buy a set of artificial teeth, since when she has got on even more rapidly. She suffers no pain, and has not vomited. The bowels act regularly. About fifteen months after the operation there was some recurrence of indigestion. The patient was working very hard at the time. The symptoms abated under treatment, with avoidance of overwork. At Christmas, 1910, the patient was very well, and expecting a baby.

CASE III.

Mrs. A., aged 60, a patient of Dr. Colin King, Dr. Owen Lankester, and Dr. Hertz; a housekeeper. The patient had suffered from indigestion for many years, and had vomited about once every twenty-four hours for the last fifteen years. She had had a great deal of abdominal pain, especially in the epigastrium. This was considerably relieved by vomiting. The bowels had been constipated for years, and she had been in the habit of taking tabloids of cascara sagrada every other night. She never saw any blood in the vomit until about Christmas, 1909. There was no history of melaena. Gradually the attacks of sickness have become much worse and more frequent, and the patient has been unable to do her work since Christmas, 1910. At that time she brought up a large quantity

of black vomit which was proved to be blood by Dr. Colin King. She has not seen any blood since. She has had to limit her diet more and more, and to mince her food. She was able to take chicken finely minced a fortnight ago. The patient has lost all her teeth except two for many years, but she uses artificial ones. For about two months she has been in the habit of having the stomach washed out about once every third day without getting much relief. She has been sleeping badly and has wasted a great deal, but she has not weighed herself.

Examination.

On examining the stomach with the *x* rays an hour after bismuth oxychloride had been taken with bread and milk, a dark shadow was seen above the costal margin and about 3 in. to the left of the navel. After about six hours a second pouch was seen towards the right iliac fossa, and a very narrow black streak connecting the two pouches, the upper of which had emptied somewhat. A diagnosis of hour-glass stomach was thus established. On a second examination on June 28th, after a tumblerful of milk containing bismuth oxychloride had been taken, the upper pouch was well seen, but not the lower one. After about half an hour, a nipple-like process appeared on the right border of the cardiac pouch, and this was thought to be the commencement of the narrow track leading to the second pouch. On further examination, no evidence of dilatation or hypertrophy of the pyloric pouch could be made out. An operation was advised, and the patient was taken into Dorset House for this to be performed on Saturday, July 2nd, 1910.

Fig. 7. — A Shows the shadow seen by Dr. Hertz one hour after taking bismuth oxychloride. B Indicates the appearances six hours later. Without the second examination after some hours a mistake in diagnosis would have been made. o Indicates the umbilicus.

During the four days that the patient was in the nursing home she was sick once or twice every night, bringing up a large quantity of sour fermented material. She could not sleep until vomiting had occurred in the early hours of the morning. She was able to take milk, fish, jelly, and beef-tea. The bowels were only opened once, in spite of several large doses of cascara sagrada and some white mixture. Saline enemata were given three times in twenty-four hours, and these were well retained. The stomach was washed out on the night of July 1st, and again before the operation on the morning of July 2nd, half a pint of water being left in. The patient was sick in the night, in spite of the washing out. Her general appearance improved a good deal; she became less shrivelled, and had less pain.

Operation.

At 9 a.m. on July 2nd, Dr. Shipway giving the anaesthetic, the abdomen was opened through the upper part of the left rectus. The constriction was at once seen, and it was found to be adherent to a band stretching from it to the round ligament. The upper pouch was of a large size, the lower one being about a third the size of the upper. The upper pouch was very thick-walled and white, and showed prominent muscular bands. The lower pouch was thin and natural. There was no contraction or ulceration of the pylorus or duodenum, and the gall bladder was also healthy. Above the constriction a funnel-shaped ulcer could be felt. It was thick-walled, and was hard. No enlarged glands could be felt in the lesser omentum, the gastro-colic ligament, or about the head of the pancreas. The ulcer was fairly movable posteriorly. The band already mentioned was ligatured and divided, and very large pouches of the cardiac and pyloric parts of the stomach were emptied and clamped. The points of the clamps were 1 in. below the constriction and their bases on the greater curvature, 5 in. on either side of the constriction. A gastro-gastrostomy was performed in the usual way, except that two layers of perforating sutures were used posteriorly instead of one. The opening was 3½ in. long. The stricture was extremely tight, the external circumference just beyond the ulcer being no thicker than an ordinary lead pencil, so that it was difficult to imagine anything getting through. Pagenstecher's thread was the suture material used. The abdomen was closed in layers in the usual way. The operation lasted three-quarters of an hour. The patient was not shocked when she was put back to bed. She was given ¼ grain of morphine and 1 pint saline enema. During the next twenty-four hours the patient vomited several times, bringing up small quantities of brown material. The stomach was therefore washed out, and this immediately relieved the vomiting. Afterwards the patient made an uninterrupted recovery, and was last heard of in November, 1910, when she was quite well—in fact, better than she had been for over twenty years.

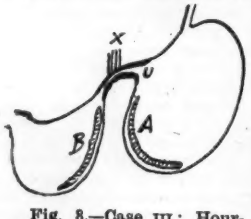

Fig. 8.—Case III: Hour-glass contraction. U, Circular ulcer and stricture with suspensory adhesion *x* extending to the abdominal wall. The A and B incisions into the cardiac and pyloric pouches start an inch below the stricture and run an inch in front of the curved lower and inner border of each pouch. This method allows very large openings to be made without either invading the ulcer above or trespassing on the gastro-colic omentum and its large vessels below. The ordinary short vertical incisions are less radical.

CASE IV.

E.B., aged 47, a married woman, having had eighteen children, thirteen of them dying before they were 1 year old. Five are now in excellent health. She has not yet reached the menopause. Apart from the present illness the patient has been remarkably healthy.

History.

The present illness started two years ago, a little before the birth of the last child. She then vomited frequently, and had severe abdominal pains. She had also been excessively constipated ever since, having to take large doses of castor oil at frequent intervals. These symptoms got gradually worse, and the patient states that at one time the bowels were not opened for six weeks and two days, and that she was only able to take slops during this period. She went to the Greenwich Hospital on February 19th, 1907, where she had her stomach washed out. She was referred to Guy's Hospital, but was too ill to come up until February 25th. The bowels were opened once during the interval. She states that she has lived mostly on milk and fish for the last two years, and that any attempt to take meat or other solid food made her vomit. For the last month she has vomited frequently every day after any kind of food. When she was admitted she was thin, sallow, and anaemic, and appeared to be in pain. Many of her teeth were missing and her breath was foul. On watching the patient the stomach became prominent above the umbilicus, and marked peristalsis could be seen. On February 27th the stomach was washed out, and a large amount of partly digested vegetable food came away. There were pieces of carrots, turnips, and cabbage, clearly proving that the patient's statement as to her diet was inaccurate. No meat was found. The food must have been taken before the patient's admission into hospital three days before. There was no free hydrochloric or lactic acid. The bowels opened several times after the washing out, but the vomiting continued to get gradually worse until March 7th, when she vomited frequently all night and during the following day. On March 8th, at 12 a.m., the patient complained of loss of power and stiffness in the legs and fingers. The fingers were fully extended and the patient was unable to flex them. Then suddenly, while the clinical clerk was watching her, the fingers became forcibly clenched, the elbows flexed, and all the muscles of the arm and forearm were firmly contracted and then slightly relaxed again to their fullest extent. Her legs also became suddenly extended to the full, being stretched out in bed with the balls of the big toes touching. The calf muscles were very hard and so were all the thigh muscles. The facial muscles contracted, distorting the face. The patient could not speak. After about half an hour the attack slowly passed off. Then the patient lay in bed quite exhausted. She said that the contractions had been very painful. She had similar attacks at 1 p.m., 5 p.m., and 8 p.m., the latter developing while the stomach was being washed out.

Operation.

An operation was decided upon and performed at 10 p.m. on March 8th. It was not thought wise to wait until the next day on account of the increasing severity of the tetanic attacks. When the abdomen was opened a large saddle-shaped ulcer was found 3 in. to the left of the pyloric ring. This was situated at the lesser curvature and extended to the anterior and posterior walls of the stomach, mostly the latter. The greater curvature had been drawn close up to the ulcer, thus making a very tight constriction and an hour-glass stomach, but there was no obstruction of the pylorus, so that the small pyloric pouch was not dilated. It was therefore decided to make an opening between the cardiac pouch and the jejunum. There was clearly no indication either for a plastic operation upon the stomach or for a double gastro-jejunostomy. A posterior gastro-jejunostomy without a loop and without inversion was made, the opening being at least 3 in. in length (Fig. 9). The patient was very bad under the anaesthetic and the operation had to be performed as rapidly as possible. The patient was back in bed within twenty-five minutes of leaving it. A saline rectal infusion was given shortly after the operation and the patient then developed her most severe attack of tetany, and it was feared that she was dying in it, but fortunately it passed away. She had one other slight attack at 6 p.m. the following day, twenty hours after the operation. From this time she made an uninterrupted recovery, gaining flesh rapidly. She left the hospital quite well about three weeks after the operation. An attempt to trace her in September, 1910, failed. She had left her former address, but when she was last heard of, about a year after the operation, she was quite well.

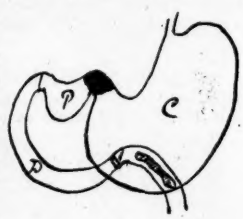

Fig. 9.—Case IV: Hour-glass contraction in the prepyloric region without pyloric stenosis. A single posterior gastro-jejunostomy proved entirely satisfactory. The patient was suffering from severe tetany.

CASE V.—*Hour-glass Contraction and Pyloric Stenosis.*

Miss N., aged 40, sent by Dr. Wynne of Northiam, was admitted into Guy's Hospital on June 9th, 1910, for gastric symptoms which were very suspicious of hour-glass contraction of the stomach. The following is the report of the ward clerk, Mr. Price Harris

History.

The patient first noticed symptoms fifteen years ago. These were acute attacks of indigestion followed by vomiting. These attacks lasted from a week to a month, there being some very acute stages when the patient had to lie down for some hours to get relief. On careful dieting with milk the patient was then able to keep off another attack for two or three months. During the attacks she often had a burning sensation which she referred to her throat, and after taking food it would generally be vomited up about an hour and a half later. In the vomit slight streaks of blood were noticed in the early attacks. During later years the attacks have not been so frequent, but they have been more severe. Four months ago the patient had her worst attack. This was accompanied by a great deal of bleeding, the patient being unconscious for twenty-four hours. In the interval between the early attacks and the last one, no blood had been noticed in the vomit. The patient has always been very constipated. For months she has not been able to take any solid food without vomiting. The pain comes on soon after eating.

Examination.

The patient is rather thin. No enlargement of the stomach could be made out on palpation. No splash could be discovered and no peristalsis could be seen.

X-Ray Report.

X-ray examination shows an irregularly shaped stomach, especially at the lower end of the cardiac and pyloric portions. The bismuth was retained at the cardiac end, and passed with difficulty to the pyloric end. Once there it passed freely through the pylorus. From appearance this may be due to adhesions or to a neoplasm.

Operation.

An operation was performed on June 10th. The abdomen was opened through the upper part of the left rectus and the stomach was examined. The pylorus, which showed two scars anteriorly, was constricted, but not very tightly, and it was adherent to the neck of the gall bladder. The pyloric pouch was dilated, and there was a tight constriction of about 1 in. long a little above the middle of the stomach, due to the healing of a saddle-shaped ulcer above the lesser curvature. No open ulcer could be discovered. With the aid of clamps gastroplasty was performed, and pyloroplasty after Finney's method was performed for the relief of the pyloric constriction. (Fig. 10.) This was not quite so satisfactory as usual, because the pylorus was not freely movable. The patient made a rapid and good recovery. She was last heard of early in December, 1910, when she was in excellent health and able to eat full diet.

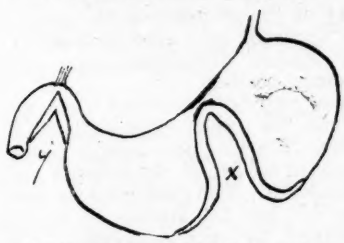

Fig. 10.—Case v: Hour-glass contraction and pyloric stenosis. Gastroplasty and pyloroplasty openings are shown at *x* and *y* respectively. The incision at *x* is a little anterior to the border of the stomach, which is occupied by the drawn-up gastro-colic ligament and its large blood vessels. In this case the cardiac pouch was the smaller.

CASE VI.

Previous History.

Mrs. W., aged 39. The patient (sent by Dr. A. J. Russell and by Dr. John Robertson) has never been very robust, although she never suffered from any illness until she was 17 years of age, when she had attacks of sickness. A gastric ulcer was diagnosed and treated. The attacks passed off and the patient remained fairly well, except for indigestion, of which she had a very severe attack about nine years ago. Two years before admission she began to suffer from attacks of sickness after meals. The sickness occurred sometimes directly after a meal and sometimes after two or three hours. The vomiting was sometimes unaccompanied by nausea and almost effortless. A clear, colourless fluid was first brought up, followed by food. The sickness was unaccompanied by any other symptoms, except that the constipation, from which the patient had always suffered, became more severe. The attacks of sickness lasted usually for two or three days, and have persisted, with intervals of not more than a month, till admission. The patient began to waste. Nine months before admission the patient began to suffer from severe pain after meals. This was situated a little below the left costal margin close to the middle line. It was relieved by vomiting and tended to spread downwards to the hips. It was frequently referred to the right and left lumbar regions and to the left shoulder. With the pain a number of other symptoms appeared. Bright blood was passed in the motions, which gave place later to tarry motions during the attacks. The patient had difficulty in swallowing solid and semisolid foods, but not liquids. A feeling of obstruction was referred to the episternal notch. The patient was unable, both during and between the attacks, to take more than a cupful of food at a time. A lump appeared under the left costal margin. It was especially marked after taking food, but never quite disappeared. The attacks, which now became more frequent, were accompanied by severe headaches and shivering. The patient began to lose weight more rapidly. Between the attacks she feels fairly well and is able to take a light diet of fish, etc. She has been feeling better during the last few weeks.

Examination.

The patient, when examined on November 3rd, 1910, was very thin, with a carinated abdomen and no subcutaneous fat. No tumour could be felt and no signs of dilatation of the stomach could be made out. The diagnosis of hour-glass contraction was suggested chiefly because of the patient's history, and the absence of signs of dilatation of the stomach, the recent rapid wasting, and the fact that she could not take more than half a tumblerful of liquid at a time, and even that gave her great discomfort. She was admitted into Guy's Hospital on November 9th. A test meal was given and the contents of the stomach removed some hours later and sent for chemical examination. There was no free hydrochloric acid. On the morning of the 10th the patient was given a bismuth meal and examined with the *x* rays. This immediately showed the cardiac pouch, and soon afterwards a narrow streak of bismuth passing downwards to the right from the right border of the cardiac pouch. No second examination was possible some hours later, because the apparatus had gone wrong, but hour-glass contraction was strongly suspected from the *x*-ray appearances.

Operation.

On November 11th, 1910, the abdomen was opened through the epigastric angle a little to the right of the middle line. There was some free fluid in the abdomen and a large hard mass was found under cover of the liver to which it was adherent. This mass was a little to the right of the middle of the stomach, the lower border of which had been drawn up towards the upper, which was firmly adherent to the liver. It was 3 in. long, and the constriction was tubular and very tight. The mass was also adherent posteriorly and to the mesocolon. The pyloric pouch was small, and the pylorus was not constricted. The duodenum was dilated. It was impossible to bring the cardiac and the pyloric pouches together, because of the small size of the pyloric pouch, and especially the rigidity and extent of the growth. Moreover, it was clearly sufficient to drain the cardiac pouch into the intestine. The cardiac pouch was small, and so tightly distended that it could not be brought into the wound. A stomach tube was sent for, but meanwhile an attempt was made to empty the cardiac pouch through the constriction, and this succeeded sufficiently to allow a pouch of the stomach to be got into the clamps. A posterior gastro-jejunostomy was impossible, because the growth was adherent to the mesocolon. Therefore the jejunum, 8 in. from the duodenum, was joined to the front of the lower left anterior part of the cardiac pouch well away from the growth, the jejunum being turned to the right, so that the distal part of it could be attached to the lower end of the gastric wound for better drainage. The splenic flexure was so movable that it was easy to place the loop of the jejunum to the left of the transverse colon instead of in front of it and the lumbar spine. As it lay in the hollow of the left loin it seemed to be in a very satisfactory position for drainage. The abdomen was closed in layers, catgut being used for the peritoneum and rectus sheath, salmon-gut uninterrupted sutures for the skin and rectus sheath, and catgut for the skin.

PATHOLOGY.

For a long time hour-glass contraction was thought to be nearly always congenital in origin, but Moynihan has shown that it is almost invariably due to gastric ulcer. The ulcer, which is generally placed at the lesser curvature and extends on to the anterior and posterior surfaces of the stomach, gradually contracts and draws the greater curvature upwards. Adhesions also form to the under surface of the liver, to the anterior abdominal wall, or towards the spine. These may drag upon and narrow the stomach. In a few cases carcinoma may give rise to hour-glass contraction, but it is probable that even then a simple ulcer is the primary lesion. The history of my sixth case suggests this view. There is little doubt that spasm of muscle around an ulcer also plays an important part in narrowing the tubular orifice joining the two gastric pouches, and it must be remembered that hour-glass contraction frequently develops in the neighbourhood of the mid-gastric sphincter. There is a specimen in the museum at Guy's Hospital showing a moderate degree of hour-glass contraction due to gastrostomy. In 5 of my patients the contraction was undoubtedly due to gastric ulcer. In 4 of them there was active ulceration at the time of operation, and in one of these the left lobe of the liver was excavated by the ulcer. In the other 2 there was so much thickening and scarring as to leave no doubt as to the previous existence of ulceration. The situation of the constriction varied a good deal; thus the cardiac pouch was the larger in 3 and the pyloric in the other 3. In Case I the cardiac

pouch was extremely small, being only a little larger than an ordinary hen's egg. Usually, the cardiac pouch is the larger. In 2 of my 6 patients the pylorus was also contracted as the result of previous ulceration. In these 2 the pyloric pouch naturally was dilated, and was even larger than the cardiac.

DIAGNOSIS.

It is a very striking fact that 5 of the 6 patients had suffered from severe gastric symptoms for many years—1 for 26 years, 1 for 22, 1 for 15, 1 for 9, and 1 for many years. The chronic course of the disease is dependent upon the position of the ulcer opposite a wide part of the stomach, where it takes a long time to cause obstruction. It is notable that in the only case in which the ulcer was in the pre-pyloric region the symptoms progressed far more rapidly and terminated in tetany within two years of the first symptom. It is noteworthy that melaena only occurred in one of the patients, and that haemorrhage is not recorded at all in 3 of them and only once in the others. All the patients had wasted a great deal, and 3 of them looked so ill as to suggest the existence of malignant disease. Various signs which are supposed to be of diagnostic value may now be mentioned. The following account is taken from Mr. Moynihan's[1] classical paper upon the subject:

1. If the stomach tube be passed and the stomach washed out with a known quantity of fluid, the loss of a certain quantity will be observed when the return fluid is measured. Thus, if 30 oz. be used, only 24 can be made to return. Wölfler, who called attention to this sign, said that some fluid seemed to disappear "as though it flowed through a large hole"—as, indeed, it has, in passing from the cardiac to the pyloric pouch. (Wölfler's "first sign.")

2. If the stomach be washed out until the fluid returns clear, a sudden rush of foul, evil-smelling fluid may occur; or if the stomach be washed clean, the tube withdrawn and passed again in a few minutes, several ounces of dirty offensive fluid may escape. The fluid has regurgitated through the connecting channel between the pyloric and cardiac pouches. (Wölfler's "second sign.")

3. *Paradoxical dilatation.* If the stomach be palpated and a succussion splash obtained, the stomach tube passed, and the stomach apparently emptied, palpation will still elicit a distinct splashing sound. This is due to the fact that only the cardiac pouch is drained; the contents of the pyloric remain undisturbed, and cause the splashing sound on palpation. For this phenomenon Jaworski has suggested the appropriate name of "paradoxical dilatation." Jaboulay has pointed out that if the cardiac loculus be filled with water, a splashing sound can still be obtained by palpation over the pyloric pouch. The sign of paradoxical dilatation is best elicited after washing out the stomach in the ordinary manner. When the abdomen is examined at the completion of the washing, and when the stomach has been apparently drained quite dry, a splashing sound is readily obtained, for some of the fluid used has escaped into the pyloric pouch through the connecting channel.

4. Von Eiselsberg observed in one of his cases that on distending the stomach a bulging of the left side of the epigastrium was produced; after a few moments this gradually subsided, and concomitantly there was a gradual filling up and bulging of the right side.

5. Von Eiselsberg also called attention to the bubbling, forcing, "sizzling" sound which can be heard when the stethoscope is applied over the stomach after distension with CO_2. If the two halves of a seidlitz powder are separately given, and the stomach be normal or dilated, no loud sound is heard anywhere except at the pylorus; if a constriction is present in the stomach a loud, forcible, gushing sound can be easily distinguished at a point 2 or 3 in. to the left of the middle line.

6. I first called attention two years ago to a sign which I have since found of great service in establishing a diagnosis of hour-glass stomach. The abdomen is carefully examined, and the stomach resonance is percussed. A seidlitz powder, in two halves, is then administered. On percussing, after about 20 or 30 seconds, an enormous increase in the resonance of the upper part of the stomach can be found, while the lower part remains unaltered. If the pyloric pouch can be felt or seen to be clearly demarcated the diagnosis is inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen be watched for a few minutes the pyloric pouch may sometimes be seen gradually to fill and become prominent.

7. Schmidt Monard and Eichhorst have both seen a distinct sulcus between the two pouches inflated with CO_2.

. . . The two aids to diagnosis of greatest value are, it will be seen, the washing out of the stomach and its inflation with gas by the administration of a seidlitz powder in two portions.

But most of these methods are only of historical interest, and although they are worthy of notice on this account, no reliance can be placed upon negative results obtained from their application. Positive results are certainly of value, especially the escape of turbid fluid through the tube after the stomach has been apparently washed clean. The result of inflation with gas may also be useful. It is obvious that positive results cannot be expected from these tests if the constriction is at all tight, and these are the very cases in which prompt diagnosis is most important.

The bismuth and *x*-ray test if carefully applied is reliable and is by far the best clinical method of finding out if there is or is not hour-glass contraction. It also serves to show if there is pyloric obstruction as well, for in the absence of this complication the bismuth passes from the pyloric pouch into the intestine in a natural way. To obtain accurate results from it, experience and careful interpretation are required, for a casual examination may lead to a wrong diagnosis. It is absolutely necessary to examine the patient both in the vertical and horizontal positions.

1. Hour-glass contraction has been diagnosed when a subsequent operation has shown that the condition does not exist. Dr. Hertz tells me that the mistake is due to the weight of the bismuth in the lower part of a *dilated* dropped stomach. This drags upon and narrows the middle part of the stomach, giving it an appearance somewhat resembling, but not identical with, that due to hour-glass contraction. If a patient with dilatation of the stomach and gastroptosis be examined upon the screen while taking the bismuth, the latter can be seen to pass *immediately* into the lower part of the stomach, whereas with hour-glass contraction the bismuth takes *a long time to reach* the pyloric pouch. Moreover, the dark line joining the two shadows passes from the *lowest point* of the upper one when the stomach is merely dilated, but from the *right border* when there is true hour-glass contraction. It is also probable that spasm of the mid gastric sphincter occasionally makes a narrowing somewhat resembling hour-glass contraction. The writer has seen this spasm during an operation for duodenal ulcer. An ulcer upon the lesser curvature and adherent to the liver may so limit the mobility of the stomach as the patient stands as to produce an apparent hour-glass contraction. The constriction of the shadow disappears when the patient assumes the horizontal position.

2. Hour-glass contraction may be overlooked when the stricture is very tight, unless the screen examinations are repeated several hours after the bismuth meal is taken. The bismuth method was used for five of my patients, and in all of them it was successful. The examinations were kindly made by Dr. Hertz (2), and Dr. Morton (3), one of the patients being examined by each observer. The writer examined Case I. Other methods of examination were used, but the results compared very unfavourably with those obtained by the bismuth method. In two cases the constriction was so tight as to make all other methods useless.

Case I presented unusual difficulties of diagnosis because the patient was unable to swallow more than a very little at a time, although there were evident signs of dilatation of the stomach. The first sign suggested oesophageal stricture and the latter pyloric obstruction; but hour-glass contraction with a small cardiac pouch seemed the most likely explanation in view of the history. Examination by the *x*-ray and bismuth method settled the point in a few minutes in a most graphic and conclusive way. It is important to ascertain if there is any active ulceration as well as hour-glass contraction. If there is much pain and also localized tenderness in the epigastrium, the presence of ulceration may be suspected. This suspicion may be confirmed by the discovery of blood pigment in the vomit or faeces. Superadded malignant disease may be strongly suspected by the absence of free hydrochloric acid in the gastric contents or the presence of a hard swelling in the epigastrium, or of enlarged glands at the root of the neck.

TREATMENT.

The experience of pyloric constriction and the past history of hour-glass contraction make it clear that medical treatment by dieting and lavage should not be continued if the patient is losing ground. The risk of operation is slight if undertaken before the obstruction is severe, and before the general condition of the patient has been allowed to get bad. It is particularly necessary to operate without delay when ulceration is present, for even if the ulcer does heal as a result of medical treatment, this must lead to an increase of the obstruction. The bismuth method gives a good indication of the tightness of the stricture. The first thing to do

after opening the abdomen is to examine the stomach, the pylorus, and the duodenum thoroughly. Without this precaution it would be easy to overlook either a cardiac pouch or pyloric obstruction. The exact nature of the operation to be performed must depend upon the conditions found upon exploration. The same operation is not suitable for all cases. A good deal depends upon the presence or absence of ulceration, of pyloric obstruction, and of adhesions. When there is no pyloric obstruction, and especially if the pyloric pouch be small, a single posterior gastro-enterostomy is all that is necessary, the cardiac pouch, which is generally large, being easily joined to the jejunum. With an open pylorus there is no fear of stasis in the pyloric pouch. The condition then differs very little from ordinary pyloric obstruction, for which posterior gastro-jejunostomy is satisfactory. When pyloric obstruction complicates hour-glass contraction there is more doubt as to the best treatment. A double posterior gastro-enterostomy is not satisfactory for various reasons. It is difficult to drain the two pouches thoroughly through the limited space available within the loop of blood vessels in the mesocolon. Moreover, there are usually a great many adhesions to the back wall of the lesser sac, and the transverse mesocolon may be considerably shortened; and in some instances, as in Case I, it is impossible to join the jejunum to the posterior surface of the very small cardiac pouch without risk of obstruction of the drawn-up jejunal loop by the contraction of the opening in the transverse mesocolon. Moreover, a double gastro-enterostomy through the small bloodless space available in the transverse mesocolon would be difficult and would probably lead to retraction or kinking of the jejunum with vicious vomiting. A double *anterior* gastro-enterostomy would be still more unsatisfactory, judging from the results of a single anterior gastro-enterostomy for pyloric obstruction. In some cases a single posterior gastro-enterostomy may be combined with gastroplasty or gastro-gastrostomy. The jejunum is then joined to the pyloric pouch, but I did not adopt this combination in either of my two cases, because in them the strictured pylorus was freely movable and clearly amenable to treatment by Finney's operation. This, to my mind, is more satisfactory in these cases, because it can be performed in far less time, and particularly because it carries no risk of vicious vomiting, which is still to be dreaded, especially in women exhausted by years of chronic gastric disease. It may be said that Finney's operation does not drain the stomach so well as gastro-enterostomy, but this depends a great deal upon the size of the opening, which can be made very large by Finney's method. Gastro-enterostomy is considerably better when there is active ulceration or extensive adhesion at the pylorus. As to the relative merits of gastroplasty (Kammerer) and gastro-gastrostomy, much depends upon the presence or absence of active ulceration, intractable adhesions, and upon the size and accessibility of the cardiac pouch. When there is active ulceration around the tubular stricture it is clearly better not to cut into the ulcerated area, but to adopt gastro-gastrostomy. Inseparable adhesions, especially with ulceration invading the liver (as in Case II), or a very small cardiac pouch (as in Case I), make gastroplasty very difficult and unsuitable, for some of the sewing would have to be done very deep in the epigastrium under cover of the left costal margin. For such cases, at least, gastro-gastrostomy is safer and preferable, although it may not appear to be so perfect in an anatomical sense. It must be remembered, however, that the pyloric is almost vertically below the cardiac pouch in these cases, as shown by the bismuth and *x*-ray method, and that a gastro-gastrostomy, with a very large opening therefore, provides satisfactory drainage. Usually a very large opening can be made in fairly healthy tissues. The aperture should be, whenever possible, at least 4 in. long. Unless the cardiac pouch is very small this can be provided if the aperture in the stomach be made curved, starting about 1 in. below the stricture and extending about 1 in. in front of the greater curvature as far as may be required. (Vide Fig. 8.) A vertical incision, as figured in some of the books, cannot be made of sufficient length. There is very little tension upon the suture line when this method is adopted, for the pyloric is not folded in front of the cardiac pouch. The stricture, which is relatively fixed, is neither displaced nor folded. The very movable lower borders of the gastric pouches are simply approximated. As far as external appearances go the natural shape of the stomach is almost restored by the operation. In only one of my patients was Kammerer's operation feasible. (Vide Fig. 10.) Moynihan[2] records one remarkable case in which it was impossible to join the cardiac to the pyloric pouch owing to adhesions. In this case he opened the pyloric pouch, and dilated the stricture in a retrograde manner, and to his surprise the patient made a good recovery. In the absence of complicating pyloric obstruction it is not necessary to add gastro-enterostomy to gastro-gastrostomy or gastroplasty, although it would appear at first to be a precaution against recurrence of ulceration and stenosis. As already pointed out, the *x* rays have shown us that sufficient drainage of the cardiac pouch can be provided by joining it to the pyloric one, which is not nearly so far to the right as we used to think. Moreover, a superfluous gastro-enterostomy increases the immediate danger of the operation, and introduces the risk of vicious vomiting, which is still to be remembered, especially in women. When hour-glass contraction is due to growth, or there is a reasonable suspicion that the chronic ulcer is becoming carcinomatous, partial gastrectomy is the only radical treatment. The open end of the duodenum may then be closed, and the jejunum joined to the cardiac pouch. Occasionally it may be possible to perform a radical operation, and then to join together the remainder of the cardiac and pyloric pouches without tension. When the growth is irremovable, temporary relief may be obtained by joining the jejunum to the cardiac pouch as far away from the growth as possible. For my sixth patient anterior gastro-enterostomy was the only possible operation, for the carcinoma had invaded the transverse mesocolon. The opening into the stomach was made as far as possible to the left, and well away from the growth, and the jejunal loop was then placed in the left loin to the left of the splenic flexure of the colon, with the object of lessening the risk of vomiting.

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ACUTE DILATATION OF THE STOMACH: GASTROTOMY: RECOVERY.

BY

GEORGE G. FARQUHAR, M.B., CH.B., F.R.C.S ENG.

NEARLY all the recorded cases of acute dilatation are alike in obscurity of cause and fatality of termination. The following notes refer to a case in which *one* cause was not only clear but removable, and the result was uninterrupted recovery.

A girl, aged 23, was advised by a wise woman to eat figs in order to burst a small abscess in the axilla. She ate nearly a pound of dried Turkey figs at 11 a.m., December 24th, 1910. Two hours later ineffectual retching set in with abdominal pain, which continued with increasing severity all day and the following night. The bowels moved slightly in the evening. The girl had several alarming attacks of breathlessness in the night.

I was summoned at 9 a.m. next day. The abdomen was not distended, and moved slightly with respiration. There was a general slight increase of resistance and a diffuse tenderness, most noticeable between the umbilicus and the *left* anterior superior spine. The pain had come on gradually and was now severe, especially in the epigastrium, but also in the left iliac region. The pulse was 84 and the temperature normal.

After examination she sat up with a sudden cry and gasped for breath; the pupils dilated fully, and showed momentarily a slight red reflex. For about ten seconds she looked as if she might fall back dead. When she regained her breath a little brandy and water was given and she began to retch, but only a little fig pulp came up. As this seemed too thick to flow through a stomach tube, none was passed lest it should provoke another attack of dyspnoea.

One hour later a slightly-distended dull area could be made out below and to the left of the umbilicus. An enema of soap and water was ordered and hot applications to relieve the pain, but no morphine was given at this stage.

At 3 p.m. (twenty-six hours after the onset of pain and vomiting) the patient felt no better, although the enema had acted well. The abdomen hardly moved on respiration and was distended, especially in the hypogastric and left iliac regions, which were dull. The left flank was also dull. A uniformly tympanitic note was elicited from the ensiform cartilage to a point well below the umbilicus. The stomach

resonance extended up to the nipple, and to the left as far as the posterior axillary line. There was no obliteration of liver dullness. The rectum was not ballooned. A catheter was passed, but only about 2 drachms of urine escaped. Very little urine had been passed since the onset of symptoms. The patient wished to be sick, and I gave her a teacupful of warm water with bicarbonate of soda. Although this was not vomited, the normal stomach area remained entirely tympanitic, but the dulliness in the left flank and left iliac region increased. Having given ¼ grain of morphine hypodermically, I had her removed to hospital for operation.

At 6 p.m. Mr. John Hartley opened the abdomen. A large swelling like an ovarian cyst presented in the wound. It was tympanitic above but dull below, and was found to fill the whole of the front of the abdomen. It was recognized as an enormously distended stomach, the greater curvature being hidden below the pubis, and the lesser curvature appearing like a vertical chink between the inflated halves of the organ. The dilatation seemed to extend to the second stage of the duodenum. An area of the stomach was drawn forward and packed off with gauze from the peritoneal cavity. A small incision was made to allow gas to escape. Then the patient was turned on her right side, the stomach kept drawn forward and the incision enlarged. Fluid containing fig juice and emitting a strong vinous odour, flowed freely for a time, and then masses of half-masticated figs were removed with a scoop. The pylorus and the first part of the duodenum were found to be dilated sufficiently to admit three fingers. When all the contents had been removed the stomach contracted gradually till the greater curvature was just below the umbilicus. The wound in the stomach was closed in three layers, and the abdominal wall brought together in the usual way without drainage.

The patient bore the operation well, had a fair night, and expressed herself as much more comfortable next morning. No sickness followed the anaesthetic nor was there any disturbance of digestion during convalescence. She was fed by nutrient enemata for two days and no solid food was given for a week. Recovery was uneventful and complete.

Looking back on this case, one wonders how the branches of the vagi in the stomach could recover. Some of them must have been stretched to three times their usual length. Is it not possible that this may account for the attacks of dyspnoea?

THE TREATMENT OF APPENDICAL ABSCESS WITH PURE CARBOLIC ACID AND IODOFORM.

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The value of pure carbolic acid as a preventive of sepsis has been known since 1865, when Lister first employed it for that purpose in compound fractures. How powerful a deterring agent it is to the extension of septic processes is well known to all those who have employed it to check the advance of traumatic gangrene. By freely swabbing a putrid wound and soaking with the acid all necrosing tissue any further extension of the gangrenous process is prevented, and in a very short time pain and fever disappear and the wound takes on a healthy healing action.

The striking inhibitive effects of the drug when thus used for external conditions led me to venture upon its employment for cases of appendical abscess where the extreme offensiveness of the discharge and the necrotic processes in the appendix suggest conditions not altogether unlike those met with in traumatic gangrene.

Operation.

Let me outline the method of procedure before making further comment:

1. The abdomen is opened in the right iliac region by the usual "gridiron" incision. Should more room be required the incision must be carried either upwards or downwards, dividing the fibres crossways of the internal oblique and transversalis muscles. This extension of the wound should always be avoided, if possible, as rendering the subsequent formation of a hernial protrusion much more likely.

2. If there are no adhesions encountered between the visceral and parietal peritoneum sufficient to effectually cut off the general peritoneal cavity, gauze plugs are inserted so as to afford complete protection of the cavity when the abscess is opened.

3. The abscess is now sought for by carefully breaking down the adhesions, and when once pus begins to well up it is rapidly swabbed away until the cavity has been freely exposed and practically dried.

4. The appendix is then sought for, and, if reasonably possible, removed; the caecal stump is touched with pure carbolic acid, and invaginated by a purse-string gut suture.

5. The abscess cavity is freely wiped with a small gauze swab soaked in pure carbolic acid. An effort is made to reach every part of the cavity. A dry swab is then introduced to soak up any of the remaining acid, and immediately thereafter any amount up to half a teaspoonful of iodoform is put into the cavity, and with a blunt instrument smeared over its walls.

6. A rubber drainage tube about a quarter of an inch in diameter is conducted to the lowest part of the cavity, and on one side of the tube a narrow strip of iodoform gauze is packed in zigzag fashion, just sufficient to fill the cavity; this, with the tube, is conducted out of the abdomen about the centre of the wound.

7. The protective gauze plugs encircling the involved area are withdrawn, the edges of the wound dusted with iodoform, and closed by through-and-through silkworm gut sutures.

After-Treatment.

The after-treatment is as follows: On the second day after the operation the iodoform gauze packing is partially removed; on the third day it is completely removed; and, however fetid may have been the pus at the time of operating, the plug will be found to be perfectly "sweet." On the fifth or sixth day the drainage tube is taken away, and on the tenth day the stitches are removed. At the end of four weeks the patient is allowed up.

Synopsis of Cases.

The accompanying table, which I have been enabled to draw up mainly through the kind help of my Resident Infirmary Assistant, Dr. John P. Kinloch, contains all the cases in the hospital in which I have used pure carbolic acid in the way just described.

It will be noticed, first, that in 16 out of the 27 cases the abscess was reached by the ordinary "gridiron" incision, neither muscle nor aponeurosis being divided across the direction of their fibres.

Secondly, in every instance the peritoneal cavity was opened—that is to say, the abscess had to be reached through the non-adherent walls of the visceral and parietal peritoneum.

Thirdly, in 25 cases out of the 27 the appendix was sought for and removed. In one of the remaining two it was only partially removed, as a portion had disappeared, while in the other it could not be found.

Fourthly, every case recovered, and in none were there any subsequent complications, such as subdiaphragmatic abscess, pylephlebitis, pneumonia, or other conditions suggestive of septic absorption or local accumulations. The pulse and temperature usually fell within twenty-four hours.

Fifthly, the subsequent results of operation were traced in 25 out of the 27 cases, and 19 of these 25 were seen and examined. With the exception of the twenty-seventh case, which had only been operated upon a month previously, the interval between operation and report ranged from three months to four and three-quarter years. An examination of these results shows: (1) That where the "gridiron" incision was employed in 10 out of 14 cases there was some bulging of the cicatrix, mostly slight and in almost every instance at the place where the drainage tube and gauze packing emerged. (2) That where the internal, oblique, and transversalis muscles were cut across by extending the incision upwards 3 out of 6 cases showed bulging, the protrusion being in one case at the seat of exit of the drainage tube, and in the other two at the lower part of the cicatrix. (3) That where the internal oblique and transversalis muscles were cut across by extending the incision downwards and inwards the three cases so treated showed bulging—in one "considerable bulging for about 5 in."; in a second "marked bulging at lower part"; and in a third "slight bulging at lower part." Thus, then, it is seen, in reviewing these results collectively, that out of 23 cases only 7 showed no signs of bulging, and lapse of time may even lessen still more the number of these latter. Further, the bulging was least in those cases in which a "gridiron"

incision was employed with no cross division of muscle or aponeurotic fibres. And, lastly, that while the number of cases is possibly too few to admit of a very positive statement—9 in all—where the incision had to be carried either upwards or downwards, it seems probable that downward extension is more likely to be followed by a bulging cicatrix than upward.

CONCLUSIONS.

1. That, where proper precautions are taken to protect the general peritoneal cavity, this method of operating admits of every abscess being opened and every appendix sought for and removed with perfect safety.

Cases of Uncomplicated Appendical Abscess Treated with Pure Carbolic Acid and Iodoform.

No.	Sex.	Age.	Nature of Abdominal Opening.	Date of Examination after Operation.	Condition of Cicatrix: *a.* Reply by Letter; *b.* Patient Seen and Examined.
				Years.	
1	F.	37	Gridiron; no cross division of muscles	4¾	*a.* Bulging at site of drainage tube.
2	M.	22	Incision in median line over situation of abscess	4½	*b.* Ditto.
3	F.	12	Gridiron; no cross division of muscles	4½	*b.* Ditto.
4	F.	34	Internal oblique and transversalis muscles divided upwards	4½	*a.* No bulging.
5	M.	53	Gridiron; no cross division of muscles	3⅝	*b.* Ditto.
6	F.	12	Ditto	3¾	*a.* Ditto.
7	M.	22	Ditto	3½	Case not traced.
8	M.	17	Internal oblique and transversalis muscles divided downwards	3½	Ditto.
9	F.	10	Gridiron; no cross division of muscles	2	*a.* No bulging.
10	M.	51	Internal oblique and transversalis muscles divided upwards	2	*b.* Ditto.
11	M.	39	Ditto	2	*b.* Bulging at lower part.
12	M.	21	Gridiron; no cross division of muscles	2	*b.* Marble-size bulging at site of drainage tube.
13	F.	5	Internal oblique and transversalis muscles divided upwards	1½	*b.* Bulging at lower part.
14	M.	40	Internal oblique and transversalis muscles divided downwards	1½	*b.* Considerable bulging for about 5 inches.
15	M.	34	Gridiron; no cross division of muscles	1½	*b.* Bulging at site of drainage tube.
16	M.	13	Ditto	1¼	*b.* Ditto.
17	M.	11	Ditto	1⅛	*b.* Ditto.
18	M.	21	Internal oblique and transversalis muscles divided downwards	1⅛	*b.* Slight bulging at lower part.
19	M.	17	Ditto	1	*b.* Bulging marked at lower part.
20	M.	8	Gridiron; no cross division of muscles	½	*a.* Slight bulging.
21	M.	27	Ditto	½	*b.* No bulging.
22	F.	44	Ditto	½	*b.* Bulging at site of drainage tube.
23	M.	16	Internal oblique and transversalis muscles divided upwards	¼	*b.* Ditto.
24	M.	29	Ditto	¼	*b.* No bulging.
25	M.	22	Gridiron; no cross division of muscles	¼	*b.* Slight bulging at lower part.
26	F.	17	Ditto	¼	*a.* Slight bulging.
27	M.	56	Ditto	½	*b.* No bulging as yet.

NOTE.—The appendix was removed in all cases except No. 4, where removal was partial, and No. 24 where the appendix was not found. The peritoneal cavity was opened in all cases; there was no subsequent complication in any, and the result in all was recovery.

2. That this method prevents any subsequent septic complications, such as subdiaphragmatic abscess, pyelephlebitis, pneumonia, thrombosis, and other septic manifestations connected either with the wound locally or with deeper and more distant parts.

3. That, as drainage is considered advisable in every instance, the probabilities are in favour of a weakened cicatrix at the seat of exit of the tube and gauze, with, later, hernial protrusion; but, provided the incision is of the "gridiron" variety, with no cross division of muscle or aponeurotic fibres, and neither the tube too large nor the packing excessive, the bulging may be only slight.

4. That abscess formation in appendicitis must be considered a serious complication, whether regarded in its immediate or in its remote effects; and inasmuch as we can never forecast the possible formation of pus in any given acute attack of appendicitis, we should proceed to remove the appendix before such a complication could take place—that is to say, within, at the latest, forty-eight hours of the initial seizure.

A CASE OF IDIOPATHIC DILATATION OF THE COLON.

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OWING to the comparative rarity of this condition, the following notes and accompanying photographs may be of interest. Unfortunately actual measurements of the patient were not taken in such a way as to be of practical value; but it is possible that the photographs will convey a clearer and more interesting impression of the appearance of the abdomen than a mere statement of measurements.

The patient—an imbecile of low type—a native of Shetland, aged 34 years, first came under notice in May, 1904. No family history was apparently available. He was then described as "suffering from marked distension of the abdomen, through whose wall the peristaltic movements of the intestines can be readily observed. Over the middle of the right tibia in front is a typical syphilitic ulcer, another is situated on the leg posteriorly, at the junction of the middle and lower thirds." Otherwise there appeared to be no marked pathological changes other than the physical defects frequently associated with imbeciles. An attempt was made to reduce the abdominal distension by giving purgatives and by the administration of enemata, but no appreciable change took place as regards dimensions, though a free action of the bowels resulted from a large dose of castor oil. In fact, the abdominal distension appeared to become gradually greater during the first eighteen months he was under observation; then for about two years practically no change took place.

At the end of this time—that is, about three and a half years after he was first seen—he developed, without any apparent cause, a severe attack of diarrhoea, with vomiting and complete disappearance of the distension. After a couple of days, when the diarrhoea had ceased, the abdominal distension returned to about its original size. During all this time the patient persistently refused every kind of medicine, including aperients. Enemata were tried without success. The result was that he sometimes went for ten days or even a fortnight without evacuating the contents of his bowels. These evacuations took place without the administration of any drugs, and the average time between successive motions was about seven or eight

days. He always took his food well, consequently his motions were very large. He constantly passed his urine in bed, and seemed to have very little control over the acts of micturition and defaecation.

Having recovered from his first attack of diarrhoea, and the abdominal distension having returned, the patient remained in the same condition for about eighteen months, when he developed a second attack of diarrhoea and vomiting, the distension again disappearing, only to return in a couple of days when the diarrhoea had ceased. It was noted that he did not feel so well until he regained his distended condition.

He now remained in his usual health for about nine months and then began to get gradually worse. His abdomen became enormously distended, absolutely tense and of highly glazed appearance. This stage lasted about three or four months. Finally breathing became so difficult and the heart's action so much impeded that he died. There was also severe vomiting before death. The condition was diagnosed independently by several of his medical attendants as idiopathic dilatation of the colon.

Necropsy.

A *post-mortem* examination was performed, when the following pathological conditions were noticed:

There was great oedema of the legs and scrotum, the abdomen being distended to an extreme degree. On opening the latter the small intestine immediately bulged out; and on extending the incision, a quantity of pale greenish fluid flowed out of the abdominal cavity.

The alimentary tract from rectum to stomach was greatly dilated and contained practically nothing but gas. Dilatation was greatest in the descending and transverse colon. Commencing at the sigmoid flexure, it rapidly increased so that the lumen of the descending colon measured about four times its normal diameter after being deflated. At the splenic flexure the bowel was constricted, and dilatation again occurred in the transverse colon, which was between three and four times its normal diameter. Another constriction was found at the hepatic flexure, and the bowel again became dilated. Dilatation, however, was not nearly so extreme in the ascending colon and caecum.

The appendix was normal. The small intestine and stomach were considerably distended and filled with gas. The diaphragm was abnormally high and arched, the liver small, nodular, and freely movable, and showed some fatty degeneration. The spleen was normal in appearance; the kidneys showed some congestion and interstitial changes.

The heart was markedly displaced upwards and very small; the valves appeared healthy, but the pericardium contained excess of fluid. The lungs were pushed upwards, but appeared healthy.

SOME EXPERIMENTS ON COLD-CHAMBER TREATMENT.

BY

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With Prefatory Note by

PROFESSOR RONALD ROSS, C.B., F.R.S.

PREFATORY NOTE.

SOME years ago Sir Edwin Durning-Lawrence, Bart., offered funds to the Liverpool School of Tropical Medicine for the purpose of experimenting on the effect of cold on yellow fever, a subject in which he had long been interested owing to various reports which had come to his knowledge. The school found it difficult to give effect to his wishes, and the matter was allowed to drop. For a long time I have felt that much experimental work remains to be done on various possible therapeutic agencies, such as cold and heat, and in 1909 I therefore asked Sir Edwin Durning-Lawrence whether he would not assist us to commence such studies in Liverpool. He assented at once, and very generously gave a considerable sum of money for the purpose of making the required cold chamber and for maintaining the cost of the investigation. The chamber was made by the Haslam Engineering Company, Derby, and the researches were in full progress at the beginning of 1910. At first Major Williams, I.M.S. (retired), conducted them under myself; but in April Mr. J. G. Thomson, M.B., Ch.B., took up the work, and has continued it to date. He reports the total results in the following paper. I may add that there are considerable difficulties in the way of such researches, many of the experiments being rendered invalid by the death of the animals owing to various causes. Experiments with many diseases is almost impossible owing to several small difficulties.

I think, however, that some evidence has been obtained the effect that a cold dry air may retard certain infections, and will therefore probably have some beneficial effect in disease. In such an important matter as treatment, this may be looked upon as of value, and also as an indication for work in the same line in connexion with human patients. We should therefore like to advocate the construction of cold chambers in connexion with hospitals—that is, chambers where human patients suffering from various disorders, such as phthisis, could be kept under observation; and I hope that efforts may be made to carry out this idea. We should like cases for trial.

R. R.

PRELIMINARY.

No noticeable change can be observed in a patient's body as a consequence of alteration of external temperature; but nevertheless changes may be produced in his blood and tissues which may be inimical to the parasites living in him.

It is common to send patients suffering from malaria to temperate climates, for example the hills of India, and it is easier to treat such patients in England than in the tropics. Again, from a careful study of the statistics in India it has been noted that a sudden rise in the malaria-rate occurs at the end of the cold season before any new brood of *Anophelines* has been hatched out. This may be due to relapses caused by the greater heat.

In discussing relapses in malaria, R. Ross (1910) puts forward as a hypothesis that external heat probably tends to encourage these. Although the temperature of the body remains much the same, the parasites may be stimulated by the heat in some way, owing to the fact that warm climates are specially suitable to them and to their dissemination by mosquitos. The same observer, while conducting experiments in India with birds, noted when he took these to a cold climate, such as the Himalayas, that the parasites in their blood greatly diminished in numbers. Many observers, especially in Italy, have noted that season affects the plasmodia, especially the sexual forms, quite apart from the proliferation of the carrying agents.

Not many years ago phthisical patients were shut up in hot rooms, and now such patients go to the hills of Switzerland, where they are subjected to a cold dry atmosphere. In fact, there is good reason to believe that the cold acts in these cases as a tonic to the whole animal organism, and without doubt acts almost as beneficially as the purity of the air inhaled.

It has been shown by Raubitschek (1910) that white rats fed on buckwheat and exposed to the sunlight develop a disease which has been called fagopyrismus, a condition which in many respects simulates pellagra, whereas those kept in the dark remain quite healthy. Before this experiment, a suggestion that sunlight was capable of aiding disease would have been regarded as most improbable, but here we have absolute and direct proof of the influence of such natural agencies.

It is usually admitted that people who live in cold climates have more vitality and energy than those who live in the tropics. More work is done and greater energy displayed in cold climates. Too much heat and too much cold will both lower vitality. In suggesting cold treatment, however, we do not mean exposure, and we did not in any way lower the vitality of the animals observed by us. It has been well proved, after about eighteen months' experimental work with rats and guinea-pigs, that the animals in the cold chamber are livelier and take their food better than those in the varying atmosphere of the animal house, the temperature of which in the summer months was often very high. A cold moist atmosphere or exposure to a sudden change of temperature may be exceedingly dangerous to the vitality of an organism, but this is quite a different thing to the cold dry bracing atmosphere of Switzerland and Canada during the winter. All visitors to the cold chamber here admitted the efficacy of a short sojourn in it, and this was most noticeable during the heat of summer. One feels more vigorous in this chamber, and this probably better than anything else may suggest the possible value of treatment in it.

Very little seems to be known of the physiological action of cold air on the living organism. It is known that cold causes constriction of the peripheral arterioles of the skin, and that a cold bath stimulates leucocytosis. We know that animals which are homoithermal, if anaesthetized with ether, become poikilothermal, but have

little precise knowledge what exactly are the changes produced by heat and cold in the blood and tissues.

HISTORICAL.

In 1906 Dr. W. W. Crane suggested the value of cold air in the treatment of tetanus and yellow fever, and pointed out that the onset of tetanus was commoner during hot weather than during cold. Vincent of France noted (as Crane reports) that a case of idiopathic tetanus in a young man occurred several days after a "heat stroke." Experimenting with guinea-pigs inoculated with tetanus culture, he discovered that those kept in an incubator and subjected to a high temperature all developed the disease and died, while none of the controls were affected. As Crane points out, this shows that heat is an important factor in the development of tetanus. Dr. Charles C. Allison, of Omaha, has reported (Crane) on a desperate case of tetanus in a boy placed at the suggestion of Dr. W. J. McCrann, of South Omaha, in a cold storage room; he was much relieved immediately and finally recovered. Crane also points out that each temperature, high, medium, and low, has an influence of its own; that the summer incidence of such diseases as dysentery, enterocolitis, cholera morbus, etc., are well known; and that the winter incidence of bronchitis and pneumonia is also well known. He points out also that measles and typhoid are more severe and scarlet fever is less severe in warm climates.

Dr. Louis Perna, in 1909, severely criticized treatment of yellow fever by cold. Its advocate, Dr. Garcia, had said that the cold "increases the resistance of the organism" or favours the means of defence. Dr. Louis Perna says, however, that if the cold only "favours the means of defence," the statement should be accompanied by facts which sustain it. As a matter of fact, the figures of experiments given in this paper by Perna show that cold gave results which would condemn the use of the "polar chamber," or at least show that the treatment is futile. The experiments (in Havana) are reported as being made under the most favourable circumstances; but this seems almost to be incorrect when we learn that some of the patients suffered from chilblains, some from rheumatic pains, and some even had gangrene. It may be assumed that, if such complications as these did take place, the patients were not treated under favourable circumstances, but were exposed to too much cold. The first essential in cold-air treatment is proper comfort and protection for the patient. It is not suggested that patients should be scantily clothed, and that the vitality of any part of the body should be lowered. It must again be pointed out that cold air may either lower or raise the vitality of an animal; under favourable circumstances it unquestionably raises the vitality, but under unfavourable circumstances lowers it.

Raphaël Blanchard and Marc Blatin (1907) discussed the immunity of the marmot in hibernation to certain trypanosome infections. The marmot awake is fatally affected by inoculation with *T. brucei*, *T. gambiense*, *T. evansi*, and the trypanosome of El Debab; but, on the other hand, the marmot in hibernation, that is, asleep, is immune to the four species of trypanosome enumerated above. This, he says, is not due to the action of antibodies, but to the fact that the animal during hibernation is subjected to a low temperature. C. C. Bass (1910) draws attention to the fact that pellagra is greatly benefited by the onset of cold weather, and that patients sent to Colorado were greatly relieved, and in fact became quite well, when subjected to the cold bracing climate. One patient was bedridden when she left, but was up in ten days and without recognizable symptoms of disease in two weeks. In view of this fact experimental cooling of wards was attempted, but was a mechanical failure, as expense evidently prevented proper experiments being carried out.

OBSERVATIONS.

I will now give as concisely as possible the results obtained in our experimental work here at the Liverpool School of Tropical Medicine.

A chamber was constructed 12 ft. long by 7 ft. wide by $6\frac{3}{4}$ ft. high. It can be kept at any temperature between about 15° F. (= 9.4° C.) and 150° F. (65.5° C.). The temperature is reduced by an ammonia compressor worked by a 6-h.p. motor and a fan which drives in air through a chamber in which a saturated solution of calcium chloride is kept constantly trickling over corrugated iron plates. The chamber receives light through a window, and is also fitted with an electric lamp. The motor is stopped during the night, and the temperature usually rises during that time to 36° or 38° F., or thereabouts, but this of course varies with the external temperature.

The animals treated were subjected to a temperature of 20° F. during the day, and in no way suffered discomfort. They were well fed and allowed plenty of straw. It is of great importance also to note that the atmosphere of this chamber was of low humidity (40 per cent. to 60 per cent.).

MAJOR WILLIAMS'S EXPERIMENTS.

Major C. L. Williams, I.M.S. (ret.) was in charge of the experimental work with this chamber from September, 1909, until April 13th, 1910, and I will first give a short account of the results of his experiments.

So far only one human case has been treated here by the cold. The patient, W. A., suffering from sleeping sickness contracted in North-Eastern Rhodesia, spent several days in the chamber and seemed to be greatly benefited by it. The patient himself said he felt much better after treatment, and several times he walked back to the hospital, a distance of fully $1\frac{1}{2}$ miles, after his cold-chamber rest.

Table by Major Williams.

Animal Infected.	Number of Animals.		Average Incubation in Days.
T. lewisi (rat)	13	Cold chamber—6	14
		Controls—7	
T. brucei (rat)	15	Cold chamber—8	18
		Controls—7	17.7

It will be noted that the incubation period was delayed in the cold in animals inoculated with *T. lewisi*, and slightly in those inoculated with *T. brucei*. The only animal which failed to show trypanosomes was one inoculated with *T. brucei* and placed in the cold chamber. Further, it was observed that the life of rats infected with *T. brucei* was prolonged in the cold; those of animals infected with *T. lewisi*, on the other hand, were shorter in the cold. It is difficult, however, to draw definite conclusions in this case, as animals tend to recover spontaneously from this infection. Major Williams also noted a slight prolongation in the life of animals infected with Caderas. Five guinea-pigs with tetanus were placed under observation; 1 died in nine days and a half when in the cold chamber, but it is doubtful whether this animal ever developed the disease. Two injected with $\frac{1}{500}$ c.cm. of culture, and placed one in the cold chamber and one as control, died with similar symptoms in a similar time—fifty hours. As regards increase of or loss of weight in the animals, Major Williams says that in those animals on which accurate data can be founded, the results are as follows:

Table by Major Williams.

Animal.	Cold Chamber.		Controls.		Total.
	Gained Weight.	Lost Weight.	Gained Weight.	Lost Weight.	
T. lewisi (rats)	3	1	1	1	6
T. equiperdum (rats) ...	6	1	4	2	13
T. brucei (guinea-pig) ...	3	—	2	—	5
Tubercle	—	1	1	—	2
T. evansi	—	—	—	1	1
	12	3	8	4	27

It will be noted that all animals in the cold gained weight (with the exception of three, of which one was a case of tubercle), and this shows, on the whole, a favourable influence of the general nutrition. Major Williams also

inoculated 7 rats with pneumococcus culture, but these experiments were unsatisfactory as these animals evidently never developed the disease. Of 6 guinea-pigs inoculated with bovine tubercle, it was noted that the swelling at the site of inoculation burst a month later in 2 animals in the cold chamber.

Put shortly, the results brought out by experiments made by Major Williams in about 100 animals show:

1. The animals were comfortable in the cold chamber and their nutrition seemed to be favourably influenced.
2. The incubation period of *T. brucei* was delayed in the cold chamber and one after inoculation did not develop the disease.
3. The incubation period of *T. lewisi* was delayed in the cold.
4. Negative results were obtained in pneumonia, tetanus and cancer in mice.
5. The lives of Nagana and Caderas cases were prolonged slightly.
6. After inoculation of tubercle bacilli the abscess at the site of inoculation developed more slowly—that is, a month later in guinea-pigs treated in cold.

AUTHOR'S EXPERIMENTS.

In April, 1910, at the suggestion of Major R. Ross, a more accurate method for investigation of the number of parasites in the peripheral blood was begun. This was the thick film method elaborated by him and Mr. David Thomson in their study of a case of sleeping sickness (1910). By this means it is possible to detect parasites quickly when there are few in the blood, and it is possible also to count the parasites per cubic centimetre of peripheral blood.

Counts were made of the parasites at regular intervals of twenty-four hours; and as this was a laborious process and other parallel experiments were being carried out at the same time with drugs, etc., the number of animals was necessarily few. Hence the conclusions are drawn from few animals; but when we add these observations to those conducted by Major Williams we find that the results obtained by him are confirmed. I give as shortly as possible the results obtained since April 13th, 1910. In all these experiments regular counts were made every twenty-four hours.

Table of Guinea-pigs Inoculated with Trypanosomes.

Infection.	Number of Animals.	Treated in Animal House.	Treated in Cold Chamber.
T. gambiense	7	4	3
T. rhodesiense	2	1	1

Average incubation in animal house	4 days.	
,, ,, in cold chamber	13.5 ,,	
Duration of life in animal house	64.2 ,,	
,, ,, in cold chamber	97.25 ,,	

Table of Rats Inoculated with Trypanosomes.

Infection.	Number of Animals.	Animal House.	Cold Chamber.
T. gambiense	5	3	2
T. rhodesiense	3	2	1

Average incubation in animal house	4.8 days.	
,, ,, in cold chamber	6.3 ,,	
,, life in animal house	14.2 ,,	
,, ,, in cold chamber	16.3 ,,	

The results obtained with *T. rhodesiense* and *T. gambiense* are, therefore, in favour of treatment in a cold dry atmosphere. The animals did not develop the disease so quickly and they lived longer. There is another point of interest brought out, and that is the influence of cold upon the numbers of parasites actually circulating in the peripheral blood. Here the general rule is that the parasites are fewer at the beginning of infection when an animal is treated in the cold—that is, if we examine the graphs of the numbers of parasites in blood of two guinea-pigs of practically the same weight inoculated with *T. rhodesiense*, and in both of which the numbers of trypanosomes injected were the same, we find the following (see charts):

Guinea-pig 1 (animal house), 364 grams in weight, had an average number of 7,976 trypanosomes per c.mm. of blood per day during the first four weeks of infection.

Guinea-pig 2 (cold chamber), 350 grams in weight, had an average number of 4,272 trypanosomes per c.mm. of blood per day during the first four weeks of infection.

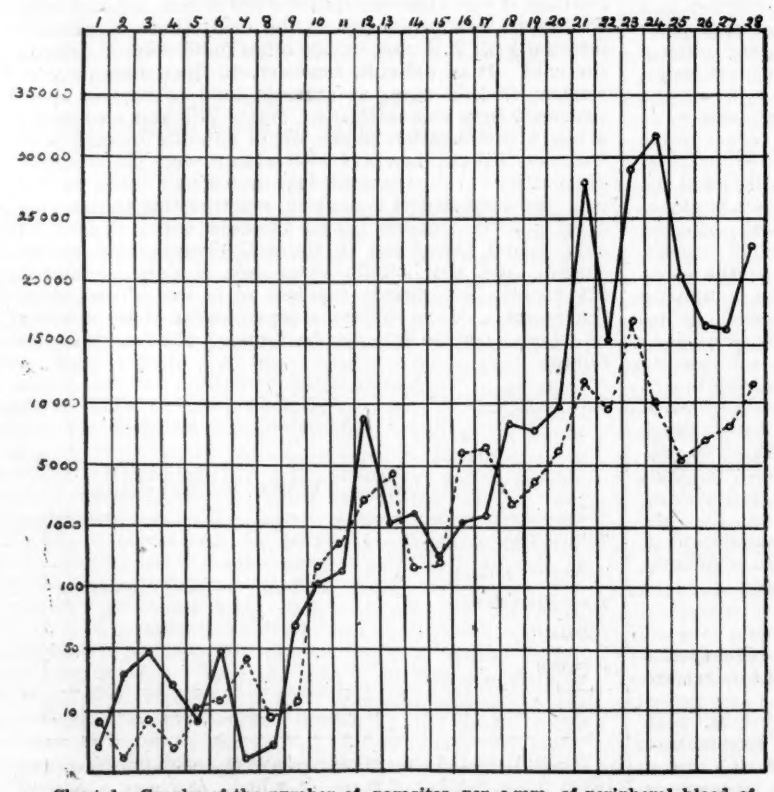

Chart 1.—Graphs of the number of parasites per c.mm. of peripheral blood of guinea-pigs 1 and 2. Continuous line=guinea pig 1 (animal house). Dotted line=guinea-pig 2 (cold chamber).

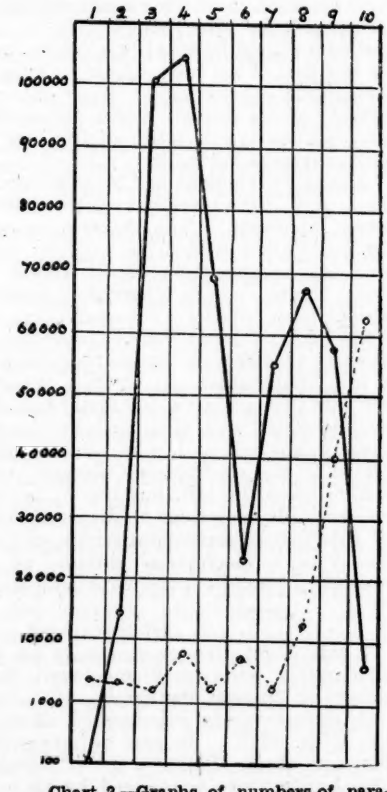

Chart 2.—Graphs of numbers of parasites per c.mm. of peripheral blood of rats 1 and 2. Continuous line=rat 1 (animal house). Dotted line=rat 2 (cold chamber).

Again, the same point is illustrated by the graphs of two rats of the same weight—namely, 113 grams—both inoculated with *T. gambiense*.

Rat 1 (animal house), had an average number of 54,171 trypanosomes per c.mm. of blood per day during the first ten days of infection.

Rat 2 (cold chamber), had an average number of 14,728 trypanosomes per c.mm. per day during the first ten days of infection.

We must admit, however, the existence of cases which did not seem to react to the cold, and in which the parasites quickly developed, in spite of treatment; but the conclusion to be drawn from all our animals is that the parasites tend to be fewer in the cold if the animal is not subjected to exposure. This we would explain by the fact that the body resistance of the animal is raised.

I would also point out that the charts refer to two selected cases, chosen because the animals were much the same in weight. We must be guarded in drawing hasty conclusions till further work has been done and until the question of individual resistance of the animal hosts (apart from treatment) has been further considered. These charts show distinctly lower numbers of parasites in those treated in the cold chamber.

We found that in rats the incubation period of *T. brucei* was delayed in the cold, but the parasites develop very rapidly afterwards, and the animals are quickly killed (in about six days). In guinea-pigs we found that the incubation period was three days in both the cold and the animal house, but the animal kept in the cold developed the trypanosomes much more slowly. In four rats inoculated with *Sp. duttoni* we found that the parasites were less numerous in the peripheral blood of those in the cold chamber.

SUMMARY.

1. We must distinguish carefully between cold and exposure, only the former being likely to be beneficial.

2. Animals in the cold chamber were livelier than those in the animal house, and the fact that the majority of these gained weight shows a favourable influence on nutrition.

3. Experiments in rats and guinea-pigs inoculated with *T. gambiense* and *T. rhodesiense* show:

(*a*) Delayed incubation in the cold.
(*b*) Prolongation of life in the cold.
(*c*) Tendency for fewer parasites to occur in the peripheral blood of animals kept in the cold.

4. Incubation period of *T. lewisi* and *T. brucei* delayed in the cold.

5. Prolongation of life of animals infected with Caderas and Nagana.

6. It was noted in two guinea-pigs after inoculation with tubercle that the superficial abscess which formed at the site of inoculation developed much more slowly in the cold (a month later).

7. In rats infected with *Spirochaeta duttoni* the numbers of parasites circulating in the peripheral blood were fewer in the animals treated in the cold chamber, and this was also observed in guinea-pigs infected with *T. brucei*.

8. The patient, W. A., said he felt better after his sojourn n the cold chamber.

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UNDER the will of the late Mr. William Taylor of Eastbourne, the Consumption Hospital, the Cancer Hospital, the Royal Hospital for Incurables, Putney; the Royal Free Hospital, London; the Royal Infirmary, Liverpool, and the Home for Confirmed Invalids each receive (subject to the life interest of the testator's wife) a sum of £2,000, half that sum going to the Samaritan Free Hospital for Women.

AN ANALYSIS OF THREE HUNDRED AND TWENTY-SIX CASES OF ASIATIC CHOLERA.

BY HENRY STEVENS, M.R.C.S., L.R.C.P.,
FUNCHAL, MADEIRA.

I AM indebted to my friend Dr. Lomelino for the following statistics. He was medical officer in charge of the Funchal Isolation Hospital during the recent cholera epidemic, and I had an opportunity of watching his devoted work during that period.

From the time that he took over the charge of the isolation hospital until the end of the epidemic he had under his care 326 cases of cholera, of which 120 ended fatally.

Deaths.

3 died of syncope during convalescence, but had previous history of morbus cordis.
2 died of meningitis.
1 died of bronchopneumonia.
1 died of thrombosis and pulmonary embolism.
2 died of uraemic coma following upon suppression of urine.
2 arrived dead.
5 arrived moribund and died within two hours.
The remainder died of collapse while under treatment.

Of the 326 cases, in roughly 75 per cent. there was an acute onset; in many it was fulminating. In the remaining 25 per cent. the onset was gradual. The duration of symptoms in those who recovered was three to ten days. In only 5 per cent. of the cases were cramps in the legs and abdomen absent. After acute symptoms had passed off some 3 per cent. of the patients went into a condition resembling typhoid, with tympanites, slight secondary diarrhoea, headache, and temperature above 101° for more than a week. Some of these gave Widal's reaction in the stronger dilutions, but they all recovered within a fortnight.

About 10 per cent. of the patients were chronic alcoholics, and this class of the community seemed especially prone to take the disease.

Of the female patients fully 10 per cent. were lactating, which seems a high percentage. There were also 5 pregnant women among the patients. Of these, 4 aborted, 2 between the second and third month and 2 between the sixth and seventh month; 2 died, but without any puerperal complications.

Among the 326 patients there were 30 babies under 3 years of age and 42 persons over 60.

Complications.

Among the 326 cases there were:

	Cases.
Anuria of more than three days ...	15 (only 2 died)
Urticaria	12
Intestinal haemorrhage	9
Parotitis	5
Thrombosis and embolism	1 (fatal)
Temperature of over 101° for more than first week of convalescence ...	8
Ophthalmic complications:	
Conjunctivitis ... about	30
Keratitis...	10 (some ulcerative)
Iritis	2

Carriers and Contacts.

The epidemic, comprising about 1,700 cases for the whole island, has been disseminated entirely by food and actual contact, and not by means of water supply. It has only been stamped out by rigid isolation or segregation of all "contacts."

Systematic examination of the faeces was carried out in the case of all convalescents, all inmates of the "contacts'" segregation block, and all hospital employees. Of the 206 convalescents, 20 carried the vibrio in the faeces for more than a fortnight after the disappearance of all active symptoms. Out of about 350 inmates of the "contacts'" block, only 6 actually developed the disease, but many who never showed symptoms were found to carry the vibrio in their faeces for more than three weeks after being in contact with a patient.

Out of 71 people employed in various capacities at this hospital, in no single instance was it possible to show the presence of the vibrio in the faeces. This speaks well for the excellent precautions adopted by the authorities.

The fact that in nearly all cases which have been carefully investigated it has been possible to establish a history of direct contact, or at any rate a visit to an infected house, has gone far towards establishing the limits of the incubation period. These seem to be from a few hours up to eight or nine days. A man in the poor quarter of Funchal, out of bravado, wrapped himself in the blankets of a cholera patient. He developed the disease in six hours, and died in eighteen hours. His family of three all developed the disease subsequently, but not until six days after his death.

The severe outbreak at the neighbouring township of Machico was traceable to one man who had slept a night in an infected house in Funchal, and developed the disease three days after his return.

Of the "contacts" who were isolated in their own homes, instead of being segregated in the isolation hospitals, a very much larger proportion than the above-mentioned 6 out of 350 subsequently developed cholera. This seems to lend colour to the statement one often sees, that even when carrying the germ one can probably avoid the disease by regular meals and by careful hygiene, such as was observed in the "contacts'" block.

Clinical Notes.

The probable explanation of the frequency of ophthalmic complications lies in the fact that the secretion of tears is almost entirely inhibited, as is the case with all the other fluid secretions of the body, owing to the tremendous loss of fluid by diarrhoea. From the same cause stomatitis, parotitis, laryngitis, and bronchitis were of relatively frequent occurrence.

A striking feature of many cases, which I have not seen mentioned in the textbooks, was the continuance of watery, choleraic vomiting long after the diarrhoea had stopped. In the only case I had to treat among the foreign residents this occurred, the vomiting continuing for forty-eight hours after the diarrhoea had ceased.

The fewness of the cases of prolonged anuria in this epidemic was probably due to the use of saline infusion as a routine treatment in all severe cases. Urticaria was just as common among the mild cases as among the severe, where saline infusion had been resorted to.

The disease has been almost entirely limited to the lowest and dirtiest of the population. No English residents have had it.

Pathological Notes.

Autopsies were only carried out in a few cases, owing to the tremendous prejudice of the peasants. In these few instances it was found that there had been great loss of the gastric mucosa, though not to quite the same extent as with the mucous lining of the jejunum and ileum, where the mucosa had been so completely cast off that it is difficult to understand how regeneration can ever take place. In most cases the bacteriological examination of the faeces and vomit seemed to show that the comma vibrio remains in undisputed possession of the alimentary canal for the whole period of the disease, to the exclusion of all the ordinary intestinal flora. Those cases in which the patient subsequently fell into a sort of typhoid state were probably instances of the comma bacillus failing to establish this undisputed possession, so that there was a rapid absorption of intestinal toxins through the denuded mucosa, resulting in a condition of profound copraemia. In these cases, and also in the afebrile secondary diarrhoeas, very good results were obtained with intestinal irrigation and the exhibition of such drugs as salol and benzo-naphthol. There were one or two cases of long-standing enteritis (a common condition among the poor here) in which a complete cure was the result of a sharp attack of cholera. In one case, a woman aged 74, who had been the victim of mucous enteritis for ten years, and had been bedridden for two years, left the hospital after an attack of cholera, with complete cessation of all symptoms of her former malady.

I can cordially endorse the remarks of my colleague, Dr. Scott, in his letter to the BRITISH MEDICAL JOURNAL of February 18th, in which he attributes the prompt stamping out of this epidemic to the excellent measures prescribed by Drs. Magalhaes and Carlos França, who were sent from Lisbon. I must again thank Dr. Lomelino for his great kindness in placing this material at my disposal and for the opportunities which he has given us English doctors of seeing the cases under his care.

THE AFTER-HISTORY OF THIRTY CASES OF MOVABLE KIDNEY TREATED BY OPERATION.

BY

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More than one writer on surgical treatment has complained that there are in the literature few reliable statistics of the end-results of the various forms of operative treatment practised for movable kidney. There are a few figures culled from the private practice of individual surgeons, but these always need supplementing by hospital reports before they can be used as indications for treatment by other hands. The writer claims to be unbiassed in favour of any particular operation.

Appended is a list of all the cases of movable kidney treated by operation during the ten years 1900 to 1909 at the Bristol Royal Infirmary It is possible that one or two may have been accidentally omitted. The after-history has been obtained, occasionally by finding a note of a subsequent visit to the infirmary, occasionally by report of the medical attendant, but in most cases by correspondence. Many of the patients kindly came to be personally interviewed by me. They were examined both sitting up and lying down.

Unless otherwise stated, the indication for the operation was repeated attacks of dragging pain. It is not customary to operate here unless the kidney is sufficiently movable to allow the hands to get above and hold it down.

I have thought it better to include in the list even those whose after-history could not be traced, owing to removal from residence, etc. The total number reported on is therefore 38, which, however, represents more than that number of patients, on account of relapses on the same or opposite side of the body. During the same period, 21,143 surgical patients were treated at the infirmary.

It may be remarked that all the patients were women, that the ages ranged from 22 to 58, and that the right kidney alone was operated on in every case except one (E. D.), in whom both sides were fixed at an interval of a year.

It has not been customary to prescribe a belt after operation.

OPERATIONS PERFORMED.

Three totally distinct operations are well represented. The first shows a good deal of variety in detail.

1. *Transcortical Suturing.*—The kidney is stripped of its fatty capsule, and as far as possible of its true fibrous capsule. Sutures, usually three, are passed by means of a curved needle through the substance of the organ, and by them it is fixed to the muscles of the loin, taking a deep hold both of kidney and of muscles. In at least three cases (probably more), a turn including the last rib was taken. The suture material has usually been stout catgut, in some cases reindeer tendon, and occasionally silk or silkworm gut. The muscles are then carefully sewn together. An effort has usually been made to avoid injuring the last dorsal nerve. I have included here two cases in which mattress sutures were carried through capsule and kidney substance, muscles and skin.

2. *Fixation by the Capsule only.*—The true fibrous capsule is partially stripped off, and sutures of catgut or reindeer tendon are used to attach the flaps of capsule to the muscles.

3. *Pure Carbolic Acid and an Iodoform Gauze Sling.*—The kidney is exposed by the usual lumbar incision, the fatty capsule removed, and the whole surface painted with pure carbolic acid. Then a sling of iodoform gauze is arranged to support the lower pole, the ends being brought

out and tied over a supporting strand of dressing placed on the wound. The muscles are sewn up in layers (in the earlier cases they were sewn by a through-and-through suture of silkworm gut). The gauze sling is left in for about a fortnight.

REPORT OF CASES.

I. *Cases in which the Kidney was fixed by Transcortical Suturing (Sixteen Cases, with After-History in Fourteen).*

Case 1.—A. M., aged 18, was seen in 1904 on account of pain in the right side and vomiting. The appendix had already been removed without giving relief. The kidney was fixed with catgut sutures. The nephropexy relieved her for only a short time.

This patient was again seen in 1907, when the symptoms were as before. The kidney was found to be lower than normal, and moved with respiration, but not freely. It was again fixed, catgut sutures being employed as at the previous operation. *After-History:* Little or no relief was obtained. Later in 1907 gastro-jejunostomy was performed, and the patient has since been perfectly cured of her symptoms. The kidney was found satisfactorily fixed when the gastro-jejunostomy was performed.

Case 2.—M. M., aged 48, was operated on in 1905, the kidney being fixed with catgut sutures. *After-History:* The patient was seen and examined in February, 1910. She considers that the operation has given her great relief, and regards it as a success. She still gets a little pain when weary. The kidney has become quite loose; hands can be got above it.

Case 3.—S. V., aged 29, operated on in 1905, catgut sutures being employed. *After-History:* More than a year afterwards the doctor wrote to say that she was quite well. No recent information.

Case 4.—A. H., aged 32. Operation took place in 1908, the kidney being fixed with catgut sutures. *After-History:* In February, 1910, the patient writes: "I feel great benefit from it."

Case 5.—E. S., aged 23, was operated on in 1905; the kidney was fixed in position by catgut sutures. No information has been obtained as to the subsequent history of this patient.

Case 6.—L. D., aged 25, underwent operation in 1900, reindeer tendon being employed for suturing. *After-History:* In February, 1910, the patient writes: "I do not find much permanent relief from the operation. . . . I still have much pain in my right side at times. This may be due to the fact that I am obliged to earn my living by machining."

Case 7.—M.A., aged 25, operated on in 1900; the kidney was fixed with reindeer tendon sutures. *After-History:* Five months later was quite well, with no pain. No recent information.

Case 8.—E. B., aged 40; operation in 1900, reindeer tendon sutures being employed. *After-History:* The patient was seen and examined in February, 1910. The kidney pain was quite cured. For the past three years she had had some pain periodically in the groin. The kidney was not palpable.

Case 9.—E. J., aged 45, operated on in 1902; reindeer tendon sutures. No information as to after-history.

Case 10.—E. W., aged 30, seen and operated on in 1901, silk sutures being employed. *After-History:* Seven months after operation the patient was relieved of the original pain and the kidney was securely fixed, but there was pain on the left side. She was readmitted in 1907, complaining that she had had abdominal pain ever since. The kidney was not palpable and appeared to be fixed. Enteroptosis and neurosis was diagnosed.

Case 11.—E. D., aged 22, first seen in 1907. Both kidneys were painful and movable. At operation the left kidney was fixed with silk sutures. The patient was seen again a year later, when the right kidney was fixed, the same material being employed. *After-History:* Seen and examined February, 1910. She is completely cured, both kidneys remaining securely fixed. "Has not been so strong and well for four years."

Case 12.—A. R., aged 30, operated on in 1900, the kidney being fixed by means of two reindeer tendon sutures tied round the last rib. *After-History:* Seen February, 1910. Is quite cured. The kidney was recently examined by her doctor and found fixed.

Case 13.—M. P., aged 27. At the operation, in 1907, the kidney was fixed with catgut sutures carried over the last rib. *After-History:* The patient writes, February, 1910, that she was free from pain for six weeks, but since that time has been "more or less troubled with the pain in the lower part of the back." She has worn a belt, but still "finds it a great deal in walking."

Case 14.—A. S., aged 37, underwent operation in 1909, the kidney being fixed with two catgut sutures carried over the last rib. *After-History:* Seen and examined February, 1910—an in-patient for gastric ulcer. The kidney pain has been quite cured for the seven months which have elapsed since operation. The kidney is fixed; it lies rather lower than usual.

Case 15.—M. T., aged 52, operated on in December, 1908, two Halstead sutures (catgut) being carried through the kidney substance, capsule, muscles, and skin. The patient was very ill; vomiting; explored for possible growth o bowel. *After-History:* Seen and examined February, 1910. Right side quite satisfactory; left side now gives pain; not able to work. The right kidney is fixed—lower than usual; the left is movable.

Case 16.—L. T., aged 34, seen in 1907. At the operation the kidney was fixed with two Halstead sutures (silkworm-gut) carried through the kidney substance, capsule, muscles, and skin. *After-History:* She writes, February, 1910: "Have never felt the slightest inconvenience since the operation."

II. *Cases in which the Kidney was fixed by stripping up Flaps of Capsule and suturing them to the Muscles. (Twelve Cases, with After-History in Eight.)*

Case 17.—E. E., aged 39, operated on in 1900, reindeer tendon sutures being employed. The kidney had been fixed in 1896 by transcortical suturing, stripping the fatty but not the true capsule. It was loose in 1898; very loose and painful in 1900. *After-History:* The patient writes in February, 1910, that "the operation has been of no benefit whatever." Pain and violent vomiting returned in a few weeks; has been an invalid ever since. A little better recently.

Case 18.—A. D., aged 49, operated on in 1902, the kidney being fixed with catgut sutures. *After-History:* Writes, February, 1910, that she "has had no return of the pain," and "considers her cure permanent."

Case 19.—M. W., aged 26, seen in 1902, catgut sutures being employed at the operation. *After-History:* Writes, February, 1910, that she is "thoroughly cured."

Case 20.—A. R., aged 30. At the operation, in 1903, the kidney was fixed by means of reindeer tendon sutures. *After-History:* Five weeks after operation pain returned as before; no cause found. No recent information.

Case 21.—A. M., aged 33, operated on in 1903, catgut being the material used. The patient died of sloughing of the wound, a few days after the operation.

Case 22.—H. C., aged 35. The kidney was fixed in 1904, by means of catgut sutures. *After-History:* Seen March, 1910. The kidney is quite fixed and she has had no further pain.

Case 23.—H. T., aged 56, operated on in 1905, catgut sutures being employed. *After-History:* Writes, February, 1910, that she is much better. She gets pain in the side sometimes, because, she says, a few months after operation she strained herself getting out of a high dogcart, after which the kidney "slipped"; her doctor examined her and confirmed her opinion. However, except when working hard, she is in fair comfort.

Case 24.—A. G., aged 39, was operated on in 1905, catgut being used for suturing. *After-History:* Seen and examined February, 1910. Nervous, twitching patient. She says pain has not been at all relieved; she also has frequency of micturition. The kidney is quite loose, and hands can be got above it.

Case 25.—M. F., aged 32; operation in 1902; catgut sutures. No after-history.

Case 26.—E. I., aged 31; operation in 1903; catgut sutures. No after-history.

Case 27.—E. F., aged 37; operation in 1905; catgut sutures. No after-history.

Case 28.—A. A., aged 45; operation in 1905; catgut sutures. No after-history.

III. *Cases in which the Kidney was fixed by Painting with Carbolic Acid and a Gauze Sling. (Ten Cases, with After-History in Eight.)*

Case 29.—G. W., aged 24, operated on in 1900, carbolic acid and a gauze sling being used for fixing the kidney. *After-History:* Writes, February, 1910, that "the operation has proved very successful," and she is "quite free from pain." She was examined at Guy's Hospital, and told the kidney was securely fixed.

Case 30.—M. M., aged 25, first seen in 1900, when the kidney was fixed by painting with carbolic acid and a gauze sling. She remained well for nine months, then pain of the same nature as that she had previously experienced returned. She was again seen in 1901, twenty months after the first operation. At the second operation the kidney substance was transfixed with silkworm gut and the muscles sutured in layers. At the operation the kidney was thoroughly embedded in firm adhesions, and was accidentally cut into; it was not at all mobile. No subsequent information beyond the first few weeks, in which she was completely relieved.

Case 31.—A. D., aged 33, was operated on in 1901, carbolic acid and a sling being employed. *After-History:* Writes, February, 1910, that the operation has given her relief, and that she can perform her duties as a saleswoman with a fair amount of strength. She was seen again in April, when the right kidney was found to be low, but fixed and not painful; the left kidney was movable, but she did not say that it hurt her.

Case 32.—E. K., aged 47, had her kidney fixed in 1903 by painting with carbolic acid and a gauze sling. *After-History:* She went on well till 1905, with no more pain in the kidney; in that year she was admitted and operated on for perforated gastric ulcer, and died. At the autopsy the kidney was found firmly fixed in adhesions and could not be shelled out.

Case 33.—L. N., aged 30, operated on in 1904, carbolic acid and a sling being employed for fixing her kidney. *After-History:* Writes, February, 1910, that "the operation has put her all right." She gets a little aching at times.

Case 34.—K. C., aged 39, seen and operated on in 1906, her kidney being fixed by means of carbolic acid and a sling. *After-History:* Writes, February, 1910, that "since the operation she has been much better. It appears to have been a permanent relief from the pain." In May, 1910, gastro-jejunostomy was performed, on account of gastric pain. The right kidney was found fixed and not painful; the left was movable but not painful.

Case 35.—E. S., aged 58, operated on in 1908, carbolic acid and a sling being employed. *After-History:* Writes, February, 1910, that she is "much better; can get about and do a little of her work. The pains are entirely gone, and everthing is very satisfactory."

Case 36.—A. S., aged 44, seen and operated on for movable kidney in 1908, carbolic acid and a sling being employed. Appendicectomy also was performed. The patient had long been an invalid; Mr. Grieg Smith had removed her ovaries on account of pain. *After-History:* After the operation in 1908 she was well for a year, but since then she has had much pain in the appendix region, and is a chronic invalid. She was seen and examined in February, 1910, when the kidney could not be felt and appeared to be fixed. No general enteroptosis. I thought some such condition as mucous colitis probable, from the history and character of the pain.

Case 37.—A. B., aged 33, was operated on in 1902, carbolic acid and a gauze sling being employed; the kidney was stitched to the rib to rotate it. The patient had hydronephrosis and kinked ureter. Two months after operation she was relieved. No subsequent information.

Case 38.—E. W., aged 22; operation in 1905; carbolic acid and sling. No after-history.

It will be observed that I have been able to obtain some after-history in 30 out of 38 cases, not including one (A. B.) who was well two months after the operation. Of these 30 cases a classification may be made as follows:

Operation.	Cases.	Cured.	Considerable Relief.	Little or no Relief.	Death.
1. Transcortical suturing	13	9	1	4	0
2. Suturing of capsule	8	3	1	3	1
3. Carbolic and sling	8	5	1	2	0
Total, all methods	30	17	3	9	1

One patient had both kidneys fixed with complete relief, but I have only counted her once.

It may be simplest to use the information at our disposal to find an answer for certain important questions.

Is the Operation for Movable Kidney to be Urged on Patients?

The figures have been collected by writing to hospital cases, in several instances many years after the operation was performed. This is to put a severe strain on the reputation of any operation. Such highly esteemed procedures as appendicectomy and gastro-jejunostomy would be considerably criticized by such a testing. The patient may include all sorts of subsequent troubles in the reply, and call a success a failure in consequence. In many of the "failures" here recorded the fixation of the kidney was excellent. Again, these patients are hardworking women, unable to take care of themselves and rest when weary. Nevertheless, they were well pleased with the result in 20 out of 30 cases. As we shall see, the failures were often due to an erroneous diagnosis. It may be concluded that when other possible causes of the symptoms can be eliminated the operation for movable kidney is usually satisfactory.

What are the Usual Sources of Failure?

There are two. The first is slipped kidney. In the list before us we have clear evidence that in two cases (A. M., M. M.) following the transcortical operation, and in probably two cases (A. G. and probably H. T.) following the operation of suturing the capsule, the kidney has become loose again. In a case operated on before 1900 by the transcortical method relapse occurred (E. E.), and she had a second fixation in 1900. There is no proof of relapse following the carbolic and sling operation.

It does not necessarily follow that the symptoms will return in full force. Two of the cases of slipped kidney have been classed as having obtained "considerable relief."

Some care is necessary before deciding that a kidney has really become loose again. In many cases the kidney is fixed lower than its normal anatomical position, and it may move an inch or two with respiration, and even allow the hands to meet above it, without becoming abnormally mobile.

The other source of failure is an erroneous diagnosis. Evidence for this is fairly clear in some of the cases. One patient (A. M.) had her appendix removed and her kidney fixed twice without relief; she then had a gastro-jejunostomy for slight dilatation of the stomach from healed gastric ulcer, and has been perfectly well for more than two years. Another (E. W.) had general enteroptosis. Another (A. S.) had already had her ovaries removed, and her appendix was removed when the kidney was fixed. In one other patient (M. M.) relapse appeared to be due to dragging on the scar, the muscles not having been sutured in layers.

After how long an Interval may the Patient be regarded as in all probability Cured?

Various dates are given for relapse of the pain—five weeks, six weeks, four months (kidney slipped during accidental strain), nine months (scar became weak), and one year. This last was the patient (A. S.) referred to above, in whom the kidney was probably not at fault.

What Method of Operating Gives the Best Results?

While the aggregate numbers are large enough to judge of the success of the operations considered as one, I do not consider that they are adequate to decide with authority between the three operations practised. I was particularly unsuccessful in tracing the after-histories of the second operation, and so may have missed cases that would have put it in a more favourable light. When larger statistics are available to be added to these, we may be able to speak with more confidence. We must give the third method credit that it is not yet proved that the kidney can slip afterwards, but it would be unwise to build too much on the negative evidence of only 8 cases.

Is the Suture Material of any Importance?

Three kidneys were sutured with silk, and are known to have remained fixed. In 12 cases catgut was used, and 4 have failed, possibly on account of slipping. In 6 cases reindeer tendon was used; of these 2 were not relieved, possibly owing to slipping of the kidney. Cases in which the return of pain was certainly not due to the kidney are not included here.

SUMMARY.

1. Complete or considerable relief was afforded in 20 out of 30 cases, treated by several different methods of operation.
2. In at least 3, probably 4 cases, the kidney again worked loose.
3. Several of the failures were certainly due to a mistaken diagnosis as to the cause of the pain.
4. No cases of slipping were found in 8 cases treated by the carbolic paint and gauze sling method, and followed from two to ten years.

THE "CARDIO-SPLANCHNIC PHENOMENON" OF ABRAMS.

BY W. GORDON, M.A., M.D.CANTAB., F.R.C.P.LOND.,
PHYSICIAN TO THE ROYAL DEVON AND EXETER HOSPITAL; PHYSICIAN TO THE WEST OF ENGLAND EYE INFIRMARY.

IN the *American Journal of Medical Sciences* of January, 1904, p. 125, will be found a paper by Dr. Albert Abrams, of San Francisco, on what he terms the "cardio-splanchnic phenomenon," and defines as follows:

"If the lower sternal region—that is, the sternum contiguous to the heart—is first percussed in the standing and then again in the recumbent posture, one may appreciate a decided alteration in the percussion tone; in the former attitude it is resonant or even hyper-resonant, in the latter it is dull or flat. This is the cardio-splanchnic phenomenon.[1]

Now this description is absolutely contrary to fact, and, thus defined, there is no such thing as the "cardio-splanchnic phenomenon." I was unaware of Dr. Abrams's statement till my attention was called to it last year, when I published a paper[2] dealing with the rightward edge of the cardiac dullness and the changes which occur in it with change of position. This paper slightly amplified what I had already pointed out in 1905.[3] I showed that, alike in health and in disease, the rightward margin of the

heart's dullness is, almost always, and often much, further to the right in the erect than in the recumbent posture; also that this is a point of great clinical importance, since it necessitates comparisons in comparable positions; and finally that in most cases the transverse measurement of the dullness in the erect position yields a closer approximation to the true width of the heart than the measurement made in recumbency.

The question at issue is thus no academical one; the error involved is not of the pleasant sort which can be left to die a natural death. On the contrary, this error stands right across the path to a better appreciation of the effects of posture on cardiac physical signs, that *terra incognita* to the majority of cardiac case-recorders. It must therefore be summarily disposed of, and I would ask my readers to satisfy themselves, as they can very quickly, of the absolute incorrectness of the statement I have quoted.

In order to percuss similarly in the two positions, I would suggest—though such a precaution is by no means essential—that the margin of dullness be mapped out in the sitting-erect and recumbent postures, with the fingers of the hand on the chest pointing down the body, so that no error can be thought to be introduced by a different mode of application of this hand. It will be observed that Dr. Abrams's results and mine were both arrived at by the ordinary digital method of percussion.

As sufficient instances of my own percussion have been already published, and as it may be desirable to show to some that I am by no means alone in my conclusion, I subjoin the following observations, kindly made for me, on unselected normal chests, by my friends Dr. Ransom Pickard and Dr. R. V. Solly. "R." and "L." mean "to right" and "to left" of the mid-sternal line. It will be noticed that there is not a single exception in the series. For convenience of comparison with previously published measurements, the dullness has been taken as beginning at the right side of the finger laid on the chest where the note on it, moving leftwards, is first noticed to become dull.

Dr. Solly's Measurements.

Sex.	Age.	Sitting Erect.	Recumbent.
M.	30	R. 1½ in.	R. ⅝ in.
F.	30	R. ⅝ in.	Mid-sternum.
F.	16	R. 1⅜ in.	Mid-sternum.
F.	21	R. ⅛ in.	L. ⅛ in.
M.	20	R. ⅛ in.	L. ⅛ in.
M.	23	R. ⅛ in.	L. ⅛ in.

Dr. Pickard's Measurements.

Sex.	Age.	Sitting Erect.	Recumbent.
M.	31	R. 1 in.	L. ½ in.
M.	19	R. 1 in.	L. ⅝ in.
M.	22	R. 1½ in.	L. ½ in.
*F.	28	R. 1½ in.	Mid-sternum.
F.	30	R. 1½ in.	Mid-sternum.
F.	20	R. 1⅝ in.	Mid-sternum.

* This patient was slightly anaemic.

I have explained these changes (in the way which naturally occurs to one) as being due to a dropping back of the heart from the anterior chest wall, when the recumbent posture is assumed. Dr. Abrams does not agree with this view, and states that skiagrams show that no such dropping back occurs. But Professor Rudolf of Toronto has published a skiagram showing plainly that it does occur,[4] and my friend, Dr. J. D. Harris, has taken skiagrams of three chests which also show this. Indeed, it is difficult to see why the heart should be independent of gravity, unless we assume it to be, what it usually is not, a rigid organ completely filling the interval between the spine and the sternum.

But, in any case, the appeal to skiagrams does not greatly help Dr. Abrams, for it is not difficult to introdnce error in such lateral photographs by slightly differing the direction of the rays passing through the chest. And he has himself found it impossible to demonstrate a change in sagittal skiagrams of the heart corresponding to the change he describes in the percussion dullness.

The following facts can be easily enough explained, if it be assumed that the heart tends to fall back from the anterior chest wall on recumbency when free to do so, but are difficult to account for otherwise.

1. Whereas in most hearts, normal or diseased, the changes indicated above in the rightward margin of dullness can be readily identified, in cases of extreme cardiac enlargement it is not uncommon to find no change whatever, the heart being apparently firmly wedged, owing to its size, between the anterior chest wall and the spine.

2. In the great majority of cases of cancer in their later stages—and in some cases rather early—the heart is lax like the other muscles, and is imperfectly filled (as the patient's pale surface, feeble pulse, and heart sounds, and half-empty arteries indicate), besides being sometimes smaller in size than normal; in these cases the transverse measurement of the cardiac dullness may be almost normal in the erect position, yet when the patient lies on his back this measurement becomes strikingly reduced, and, indeed, the dullness sometimes actually vanishes altogether.*

How, then, can such an error have arisen? Apparently from two causes:

1. Dr. Abrams has evidently approached the subject with a biassed mind. He begins his paper thus:

> To my knowledge this is a heretofore undescribed phenomenon as far as its clinical manifestations are concerned. The facts, however, up to the point of its clinical identification have been fully established by the physiological investigation of others.

And writes further on:

> In the erect posture the blood leaves the right heart, which topographically is beneath the lower sternum, and tends to accumulate in the splanchnic area, whereas recumbency opposes this influence of gravity.

2. He has confused percussion *sounds* with percussion *sensations of resistance*—two very different things, which must especially be kept apart in this investigation, seeing that in recumbency the anterior chest wall itself usually falls slightly towards the spine, as I have shown,[6] a change which may possibly affect the sensation of resistance in percussion. He expressly states that "in the elicitation of the cardio-splanchnic phenomenon palpatory percussion must be our chief mentor," explaining this term thus:

> The skilled clinicist in his interpretation of percussional phenomena is guided not so much by the ear as by the *tactus eruditus*; thus, palpatory percussion will often yield results which would wholly escape the observer who is influenced only by what he hears and not by what he feels.

In his definition, however, of the "cardio-splanchnic phenomena" above quoted he uses terms which are well understood to describe sounds and sounds only. "Resonance," "hyper-resonance," "flatness," and "dullness" are not descriptive of resistances. As his definition stands, his description of the effect of change of position is, as I have said, absolutely contrary to fact.

* It should also be remembered that a sort of spurious emphysema often exists in cancer cases, which may help to produce the remarkable reduction of dullness. Dr. Soltau Fenwick, I think, first called attention to this.[5]

REFERENCES.

[1] Loc. cit., p. 128. [2] BRITISH MEDICAL JOURNAL, June 4th, 1910. [3] *Med.-Chir. Transactions*, vol. lxxxix. [4] BRITISH MEDICAL JOURNAL, October 20th, 1906. [5] *Cancer and Tumours of the Stomach*, 1902, p. 74. [6] BRITISH MEDICAL JOURNAL, March 15th, 1902, "Posture and Heart Murmurs."

THE Isle of Man Hospital and the Children's Home each receive £1,000 under the will of the late Mr. James Mylchreest, late Lloyds agent in the island.

UNDER the will of the late Mrs. Margaret Eliza Clague, the widow of a Manx medical man, Guy's Hospital, London, and the Royal Infirmary, Liverpool, each benefit to the extent of £1,000. To Noble's Hospital in the Isle of Man is left a house in Douglas.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF METASTATIC GONORRHOEAL CONJUNCTIVITIS.

F. G., sailor, white, 30 years of age, single, came to the hospital with swollen and inflamed conjunctivae, and with a urethral discharge.

His family history was negative. He had followed the sea practically all his life. He drinks whisky, and uses tobacco to excess. He has always been healthy until about five years ago, when he was sick in bed with articular rheumatism. He had trouble with his eyes also at this time, and he had a specific urethritis.

At this time the eyes did not discharge much, but his trouble lasted two months, and evidently resembled his present attack.

Two or three years ago he again had a specific Neisserian urethritis, and in six months a similar "rheumatic" attack, followed in about one month by ocular trouble. He says his physician called the eye condition at that time "rheumatic ulcers," and the eyes were washed twice a day, and drops were instilled to dilate the pupils. The joints involved were the knees and joints of the right great toe, as at present.

About two weeks before admission to the hospital for the present attack he had again specific urethritis. In about one week he complained of "rheumatic" pains and swelling of the feet, so that he could not walk. Two days before admission his eyes became inflamed and a small amount of watery discharge appeared.

The left eye pains when winking. He says he first noticed the urethral discharge by heat and pain on urination two days before admission. The right great-toe has lately caused him much trouble. Tongue coated. Marked injection of conjunctivae. Much pain caused him on examining left eye. Small amount of watery discharge from this eye, and at the inner canthus a purulent accumulation is seen. Right pupil slightly dilated. Left does not react well. Abdomen tympanitic. Right great-toe swollen and tender. Smear from eyes negative for gonococci.

He was sent to the venereal ward for treatment of his urethra. This was cured in about fourteen days.

Vision, March 28th, 1910: Right eye = $\frac{6}{6}$; left eye = $\frac{2}{60}$. Left eye, catarrhal conjunctivitis, ciliary injection, and punctate keratitis. Iris thickened and discoloured.

Diagnosis: Kerato-irido-cyclitis.

March 13th, 1910.—O.D. = $\frac{6}{6}$; O.S. = $\frac{3}{15}$. Fields somewhat contracted for light.

March 29th, 1910.—O.S. better; O.D. similarly involved for three days.

April 6th, 1910.—Anterior chamber very deep. Cornea punctured and fluid spurted out. The bacteriological report shows xerosis bacillus present (probably from the conjunctiva). Another slide negative.

April 10th, 1910.—The patient improved greatly under hot packs and salicylates, and saturated solution of boric acid and drops of atropin solution (4 grains to 1 oz.) in the eyes.

Similar cases to this have responded readily to treatment of the urethral discharge, eliminative treatment, including hot packs, and the administration hypodermically of half-billion doses of antigonococcic bacterins. Such cases are liable to relapses with each recurrent attack of the Neisserian infection. It is supposed a toxin from the disease travels through the lymph channels, affects the serous membrane of the joints, and sets up the iritis.

LEONARD D. FRESCOLN, A.M., M.D.,
Assistant Chief Resident Physician,
Philadelphia General Hospital;
Fellow of College of Physicians, Philadelphia.

PUERPERAL ECLAMPSIA COMPLICATED BY GASTRIC HAEMORRHAGE.

MRS. H., aged 26, primipara, well nourished, had always enjoyed good health. All through the pregnancy she suffered considerably from sickness, associated with troublesome cough. The legs began to swell towards the end of the sixth month of gestation, but the urine examined at the time was found to be quite free of albumen. She was not seen again till the middle of the eighth month, when the swelling of the legs had increased considerably, and there was dimness of vision in the mornings, headaches, and severe pain in the epigastrium, which she put down to indigestion. The urine contained a large amount of albumen. She was ordered to bed and dieted, but diarrhoea set in, and seemed to start labour two days later. Labour pains had been present twelve hours when the first fit occurred, and the os being fully dilated forceps were applied, and a living child delivered fairly easily, as it was not quite eight months' gestation. The first fit occurred at 1.30 p.m. An hour later the patient was fully conscious, and the after-birth had come away. The patient was left an hour after delivery, and within five minutes of my leaving she had another fit, at 3 p.m. At 4 p.m. she had a third fit. As soon as she had recovered she was given 1 drachm of compound jalap powder and 20 grains of potassium bromide and chloral hydrate by the rectum, this injection being repeated every two hours. A fourth fit occurred at 5 p.m. One-sixth of a grain of pilocarpin nitrate was injected hypodermically; it acted very well, and in half an hour the patient was perspiring most profusely.

The fifth fit occurred at 8 p.m., and the sixth at 9 p.m. Chloroform inhalations used continuously did not prevent the seventh fit, which occurred at 11 p.m. She was now transfused with a quart of saline subcutaneously, and kept under chloroform while it was running in, as she was very restless and irritable. One-tenth of a grain of pilocarpine also given acted very well. At 1.30 a.m. she had the eighth and last fit, which was very severe; pulse 132 and axillary temperature 101.5° F. By the morning she had had some good sleep, took barley water and milk, the bowels had been well opened, and she had passed urine. She still complained of epigastric pain.

On the second day, after some milk and rusk for breakfast, she vomited dark altered blood, and this continued at intervals through the day, diluted as it was with a large amount of gastric juice, it amounted to at least three quarts in the twenty-four hours. She was kept on salines per rectum, only a little ice being allowed by mouth. On the third day vomiting had stopped, but frequent small tarry motions were passed. Pulse 124. Temperature in the evening 100° F.

Afterwards she had no more epigastric pain. She was allowed out of bed at the end of four weeks. The eye symptoms had quite cleared up.

The points of interest in this case are:

1. What was the cause of the gastric haemorrhage? Was it due to an ulcer, as the pain in the epigastrium might suggest, or was it due to sudden relief of intra-abdominal pressure caused by delivery? I formed the opinion at the time that there was an ulcer present, and treated the patient for such.

2. Transfusion of saline seems to be the treatment for these cases, and my regret is that I did not employ it earlier. (See case recorded in BRITISH MEDICAL JOURNAL for January 14th, 1911.)

3. Eclampsia does recur in subsequent pregnancies, I believe fairly frequently, and so in this case being such a bad one, I advised against a further pregnancy.

Swanage. W. A. REES, M.D., F.R.C.S.

MULTIPLE PREGNANCY WITH CONVULSIONS DURING LABOUR.

ON December 10th, 1910, I was summoned to attend Mrs. D., a multipara aged 32. On my arrival I found her in labour, which had then lasted an hour. She almost immediately gave birth to a child, which had presented by the breech. I then found that the uterus contained two other children, the lower of whom was presenting by the vertex, with an unruptured bag of membranes. The pains continued, but were very weak. Half an hour after the birth of the first child the patient had an epileptiform convulsion, the tonic stage lasting a minute and the clonic stage rather less. I decided to rupture the membranes and apply forceps, and easily delivered the second child. The patient then had another convulsion, which was easily controlled by the administration of chloroform. The third child presented by the breech and was born without

difficulty. The mother again had a convulsive seizure, which was again controlled with chloroform. Two placentae were delivered half an hour after the birth of the third child.

There was considerable haemorrhage, but not more than might have been expected after such distension of the uterine walls and consequent atony. Two injections of ernutin and continued massage were successful in arresting this and getting fair contraction of the uterus. The patient had no more fits, and made an uninterrupted recovery, the temperature never rising above 99.8°. The children all survived, and continue to do well.

The patient had a large ventral hernia, and subsequent inquiry into her past history revealed the fact that five years previously she had undergone ventral fixation of the uterus for prolapse. Unfortunately I had no opportunity of examining the urine previous to labour, but a catheter specimen taken afterwards contained a trace of albumen; this entirely disappeared by the sixth day.

The occurrence of the convulsions is interesting, and, as they can hardly have been eclamptic in nature, were possibly due to the fixed position of the uterus. The patient's previous confinements were quite normal, and she has never suffered from fits of any description previous to this.

FREDERICK J. C. BLACKMORE, M.R.C.S., L.R.C.P.
Hereford.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BLAENAVON COTTAGE HOSPITAL.

EXTENSIVE FRACTURE OF SKULL.

(By A. H. JAMES, M.D.Edin., Senior Surgeon.)

R. L., a collier, aged 47, received injuries in a coalpit by a fall of roof at 11 a.m. He was brought into hospital at 2 p.m.

He was suffering from a severe horseshoe-shaped scalp wound, which, except at its base, was completely torn off from the skull at the top of the head. It measured 12½ in. The skull was uninjured. Haemorrhage from the left ear indicated fractured base. There was a lacerated wound posteriorly over the occipital bone, a fissured fracture of the skull 3 in. in length, and a lacerated wound of the scalp over the right eye extending through the upper eyelid along the zygoma backwards to the ear. On raising the flap it was found that the patient had a depressed comminuted fracture involving the frontal, parietal, and temporal bones. His back was severely bruised and cut; he complained of great pain in the right chest when breathing.

The patient took the anaesthetic badly. His pupils were pin-point; pulse weak and irregular, and breathing caused great anxiety. I considered that the best method of raising the depressed fracture was by trephining above over the frontal bone, so as to raise the pieces *en bloc*, in preference to raising them piecemeal, thereby giving them a better chance of keeping in their respective positions.

An icebag was applied to the head; purgatives were given freely. As no action resulted, an enema was given on the second morning; afterwards the purgative acted satisfactorily. On the second morning it was found that the patient was suffering from traumatic pleurisy over the sixth, seventh, and eighth ribs on the right side. On the fifth day he suffered from retention of urine for thirty-six hours, and a catheter had to be used. Haemorrhage from the ear continued until the fifth day. On the third day facial paralysis developed on the left side and the left pupil became very dilated. For the first ten days the patient seemed to have great difficulty in swallowing and all his slop diet had to be given him with his head reclining to the right side. Stitches were removed on the ninth day, the parts having healed by first intention, except the posterior wound over the occiput, which suppurated. On the ninth evening he developed a sharp, continuous, pneumonic cough, due to hypostatic congestion. The temperature, which had varied from 99° to 100°, was 101°. The icebag was removed, the patient raised in bed, and brandy (℥ss) given every four hours. A mixture, containing digitalis tincture ♏viij and vinum ipecac. ♏xij, was given at 10 p.m., 2 a.m., and 6 a.m. each night until the congestion passed off on the thirteenth day. He became very delirious, especially at night, from the ninth day, and on the fourteenth day the delirium was replaced by illusions, especially in the evenings. These gradually became less severe, and on the eighteenth day his mind was quite clear. The patient appears to be making a rapid and perfect recovery, but the facial paralysis and dilatation of the pupil on the left side remain.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

Tuesday, March 14th, 1911.

Mr. RICKMAN J. GODLEE, President, in the Chair.

Traumatic Myositis Ossificans.

MR. MAKINS, in a paper on myositis ossificans of traumatic origin, said this condition was more frequent than had been supposed; 233 cases were recently collected from German army records. His paper dealt with two typical, and a few collateral, cases. The injury was usually single; although multiple or repeated traumata were alleged as causes, the determining factor was generally of greater severity. The masses most frequently were found in the quadriceps or brachialis, muscles arising from flat, plane surface of bone. Histologically they were of the cancellous type, without marrow, and embedded in fibrous tissue; the muscle proper was unaffected, and the process was in no sense a myositis. He believed they had little in common with the ossification of tendons, of which "rider's bone" was an example, or with the osseous plates met with in the fascial planes about joints in certain conditions, but were due to detachment of periosteal fibres. It was possible that there was some individual peculiarity of the tissues comparable with that "ossific diathesis" alleged in the occurrence of exuberant callus. The point he wished to emphasize was that with rest the tendency was towards reabsorption. Skiagrams illustrated the gradual disappearance of bony deposits, even of considerable size. Mr. BOWLBY described two cases affecting the elbow region, in one of which there was no blow, but severe wrenching of the muscles, whilst in the other there was a dislocation. In both the bone disappeared with rest. Most cases were met with in young people. Mr. GODLEE described a case due to a kick upon the thigh. Speaking of two others that had been operated upon by him, he said the results confirmed the opinion that they should be left alone for at least a year. At the same time operation might be necessary to remedy limitation of movement, and in most cases had at any rate done no harm. He exhibited several bones from museums at late or intermediate stages of absorption. He deprecated the use of the term "myositis." Mr. HEATH exhibited a specimen removed in a similar case, to permit free flexion of the knee, which had been seriously hampered by a mass in the quadriceps. Mr. SYMONDS referred to two cases affecting the soleus muscle, in one of which operation was performed, and was not a complete success. Some were certainly the results of sprains. Mr. CARLING exhibited radiograms of two cases.

Congenital Diverticulum of the Bladder.

Mr. BERRY detailed the history of a large congenital diverticulum of the bladder operated upon at the age of 21. The interesting feature of the case was that the left ureter entered the sac 2½ in. from the bladder proper. There was no case precisely like it in the literature. Mr. JOLY exhibited the specimen, and described a case very similar to that of Mr. Berry, except that the ureter

passed underneath the sac to the bladder. The wall of the cyst in his case contained muscular tissue. In Mr. Berry's it was purely fibrous.

Femoral Hernia.

Mr. Fagge described a method of radically curing femoral hernia by suture of the conjoined tendon to Cowper's ligament, the stitches being passed behind Poupart's ligament. He had examined 18 of his 33 cases a considerable time after the operation, and found but three recurrences.

Section of Laryngology.

Friday, March 3rd, 1911.

Dr. Watson Williams, President, in the Chair.

The following were among the exhibits: — Professor Hobday, F.R.C.V.S.: Specimens of the equine larynx, illustrating the results of the ventricle stripping operation for the relief of the conditions known as "*Whistling*" and "*roaring*" in horses. The operation consists in removing the mucous membrane completely from the pouch or ventricle at the back of the paralysed vocal cord, with the idea that two raw surfaces will thus be made, and the two sides of the ventricle adhere together, and thus completely obliterate it. It thus follows that the paralysed vocal cord which is the cause of the "roaring" must of necessity be retracted out of the lumen of the larynx, and become firmly adherent to the wall of this organ. In the discussion which followed, it was generally considered that the operation could have but a very limited application as regards the human larynx. Mr. Gay French: Endothelioma of the palate, with metastatic growths in the neck, which had derived great benefit from *Treatment with radium*, the amount used being 50 mg. Mr. Herbert Tilley: A portion of a rabbit's bone removed from the right bronchus after three years' impaction, and which had produced signs of bronchiectasis. Skiagraphy in this case had failed to reveal the presence of any foreign body. Dr. W. H. Kelson: Tumour of the right side of the neck, involving the pharynx, in a woman aged 30. The growth was a very slowly growing *Sarcoma*, taking origin apparently from the transverse processes of the cervical vertebrae. Owing to the agonizing pain suffered, an operation had been performed by the exibitor, and as much as possible of the growth removed, with complete relief to the pain. Rapid healing had taken place. Dr. Dan Mackenzie: Antrum suppuration treated by nasal antrostomy, followed by blocking of the nasal duct. The exhibitor thought that the duct must have been wounded at its lower end at the time of the operation. In the discussion that followed, the view of many members was that temporary epiphora after the radical operation on the maxillary antrum was not uncommon. Mr. Francis Muecke: A case of *Ventricular voice* in a woman aged 28; hoarseness first appeared when 3 years old, after scarlet fever. Since about 15 years old the voice had got gradually better. The general health of the patient was good. The left vocal cord could be seen, the right was atrophied; the ventricular bands were rounded, large, and on phonation came closely together, the arytenoids turning inwards and assisting to close the glottis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, February 10th, 1911.

Sir John Moore, President, in the Chair.

Dr. O'Carroll showed: (1) A case of *Athetosis* in a school-girl aged 9. The patient's right hand had been for four or five years unmanageable for action. The thumb was fixed in a position for adduction, but otherwise there was no noticeable difference between the hands when at rest. Once movements were attempted, slow spastic movements were noted in the right hand and fingers. The child had had severe whooping-cough before the affection was noticed. The exhibitor considered this had led to a cortical haemorrhage into the right hand area, the athetosis resulting therefrom. When left to herself the child, who had learnt to write with her left hand, exhibited perfect "mirror writing." The condition was improving. (2) A case of occupation spasm in a barber who exhibited weakness and choreiform movements in his right hand. His trouble had begun some ten months previously. At first there was malaise and difficulty in hair-cutting and shaving. These actions gradually became impossible. The patient was of a neurotic temperament. His work had kept him busy from early morning till late at night for many years. The exhibitor considered the movements in the patient's hand were fatigue phenomena, due to excessive use.

Cerebral Tumour.

Drs. Parsons, Benson and Wigham, and Mr. Johnston brought forward a case of intracranial tumour which was successfully localized and removed.

The patient, aged 36 years, was admitted to the Royal City of Dublin Hospital suffering from severe and continuous headache of about five months' duration. On examination he was found to have double optic neuritis, more marked in the right eye than in the left; slight paresis of lower half of the face on the left side, and slight deflexion of the tongue, when protruded, to the left. He positively denied any history of syphilis. He was given potassium iodide, 15 grains daily, for the following month, but the progress of his disease was definitely downward. He became odd in his manner, stupid, passed under him, and developed marked ataxy of lower extremities. A diagnosis of a tumour in the right frontal lobe in the neighbourhood of the face and tongue centres was made. Mr. Johnston trephined over this region, and removed a hardened mass in three portions, which was handed to Dr. Wigham, who reported that the mass was syphilitic. The operation was followed by complete loss of power in the left arm and leg. The latter soon recovered, and later on he gained free power in both arm and leg. The optic neuritis rapidly subsided, and vision was almost normal when he was discharged. There was a marked improvement in his mental condition, and all ataxy had disappeared. His blood, tested by Wassermann's reaction, gave a positive result.

He was discharged from hospital a little over two months after the operation, in full possession of his mental and physical faculties, except slight traces of optic neuritis, which was, however, in process of subsidence. In reply to questions, Dr. Parsons said the patient had been given over 400 grains of potassium iodide, but that, despite this, his condition had got steadily worse.

Section of Obstetrics.

Friday, February 17th, 1911.

Dr. H. Jellett, President, in the Chair.

Dr. Hastings Tweedy brought forward a series of 46 cases of *Wertheim's operation*. His mortality was 19.5 per cent. This percentage was swelled by the inclusion of his early cases, in which the mortality worked out at 33 per cent. for his first year. He operated on 90 per cent. of the cases seen by him, and advocated operation in advanced cancer, not in the hope of bringing about a cure, but to mitigate pain and distress. The surgeon, he said, who could count a large percentage of cures after a two-years' interval must have obtained them by selection of cases, and must, therefore, have consigned numbers of operable cancer patients to a hopeless outlook and a horrible death. Professor Smith, speaking of treatment of the ureter, mentioned Dr. Latzko's method. He made a relatively big incision into the bladder, but he did not stitch the ureter to the bladder. He anchored the bladder to the stump of the suspensory ligament of the ovary; he drew the bladder well over to the side of the damaged ureter, leaving the damaged ureter in the bladder, where, he said, it became adherent, and no trouble followed. In regard to the preliminary treatment of cancer of the cervix, he thought a bathing-cap made of rubber was one of the finest methods he knew of. The cap is fitted on to the cervix and stitched there. This would prevent implantation of the cancer cells. Dr. Purefoy, speaking of "inoperable cases," said that, providing the patient was willing, operation should be attempted on any case where the patient was likely to survive the shock thereof. Indurated tissue was no doubt often cancerous but not invariably so. Glands enlarged and hard when removed had often been shown under the microscope to be free from cancerous tissue. Sir William Smyly said that Wertheim's method was still the best, and it would be best for beginners at least to stick closely to the rules laid down by him in a work just published founded upon an experience of 500 operations. It appeared that his methods differed now very little from those advocated at the Belfast meeting of the British Medical Asso-

ciation. The cause of ureteral fistula appeared to be still an unsolved riddle. Wertheim had varied his methods with the different theories as to causation, but seemed to have had about the same number of fistulae in each hundred cases. Wertheim laid great weight on draining the subperitoneal spaces, and unfortunate results were due to this closing up. He no longer tried to expose the ureters at the beginning of the operation, but looked for them after dividing the infundibulo-pelvic ligaments. He did not try to separate the bladder down to the vagina at the beginning of the operation, but separated the bladder from the uterus, and after the ureters had been fully exposed, the bladder from the vagina. By doing so there was less risk of injuring the ureter, and it was possible to go further out to the sides; in cases where the bladder was fixed to the uterus or vagina a finger could be passed from the side underneath the cancerous part, and so an idea obtained of how much cancerous tissue had to be cut through. Dr. THOMPSON asked whether it would not be advisable to remove the kidney on the side of an injured ureter, as many people got on well with only one kidney. The PRESIDENT said, with regard to the technique of the operation there were two modifications—one, originally taught by Wertheim, in which the first step was to separate the bladder from the uterus; the other by Bumm, in which the infundibulo-pelvic ligament was divided, and the peritoneum at the base of the broad ligament cut through, after which the ureter was easily seen. It seemed to him (the speaker) simple to find the ureter by this method, and it could then be traced into the cancerous mass. Dr. TWEEDY, in reply, said he was surprised at the great number of cases of ureteral fistulae and cystitis met with in Wertheim cases, and this in spite of the most elaborate aseptic precautions and preparation of the patient. The preparation could be carried a great deal too far. Personally, he thought a fortnight a shocking interval to leave a woman without operation, and tended to make the chances of recovery graver and less hopeful. Therefore he would say an interval of two or three days should be the utmost to leave a patient without operating, as every hour was only adding to the chances of metastasis. Wertheim made a mistake in not using gloves, as in this operation especially gloves were required. Drainage of the cellular tissue was greatly advocated by Wertheim. On the other hand, many great authorities—for instance, Dr. Lockyer of London—hardly used drainage at all. He did not operate on 90 per cent. of patients, but selected his cases. In other words, he looked for early cases of cancer. If it was an early case it was not necessary to drain. If a late case, it must be drained. But early or late, gloves were used. It was necessary for Wertheim to drain, but not for Lockyer. Removal of the kidney had been done very many times. Of course, it added greatly to the shock of a patient who was already in a wretched condition. His objection to the President's method was that he was afraid of going too deep down. The ureter retracted towards the cervix, and got buried in a mass of cancer tissue. He was very fond of draining through the abdominal wound, and in this operation there was no better channel—the plugging in the subperitoneal spaces passed through the vagina, but was completely closed off from the pouch of Douglas, and this he drained with the gauze through the lower angle of the wound. The great feature of Wertheim's operation was the complete shutting off of the peritoneum with drainage, and abdominal drainage was also at times a great advantage.

EDINBURGH OBSTETRICAL SOCIETY.

Wednesday, March 8th, 1911.

Dr. F. W. N. HAULTAIN, President, in the Chair.

Anaphylaxis in Pregnancy.

DR. R. W. JOHNSTONE described the supersensitiveness following on the injection of certain complex proteins into an animal, and gave the prevailing explanation of the phenomenon. Within recent years attempts had been made thereby to explain the toxaemias of pregnancy, the idea being that an alien protein from the fetus might supersensitize the mother. Some observers had found that the injection of placental extracts produced toxic symptoms, but these were probably due to products of autolysis, and did not occur when perfectly fresh extracts were used. Dr. Johnstone had carried out experiments with saline extracts of placentae, and with suspensions of powdered placentae, in which autolysis had been guarded against. Evidence of anaphylaxis was obtained in eight out of twelve animals after the injection of the juice of normal human placenta; no such evidence was obtained with the placenta of an eclamptic patient; the injection of placental juice into animals of the same species gave negative results; no anaphylaxis followed the intraperitoneal introduction of a suspension of placental powder. The conclusion was that anaphylaxis did not explain the commoner manifestations of the toxaemia of pregnancy.

Gastro-Mesenteric Ileus.

Mr. E. SCOTT CARMICHAEL read a paper on so-called gastro-mesenteric ileus, and gave an account of 3 cases: (1) Operation of ventrifixation for retroverted uterus. On the third day after, frequent vomiting, which was mistaken for delayed chloroform poisoning. At the patient's own request, she was turned on her left side and partly on her face. She soon vomited several pints of fluid and was completely relieved. (2) Operation for hydatid cyst of the liver. From the second to the ninth day frequent vomiting without much effort. Generalized peritonitis suspected, but distension was confined to the epigastrium and left side of abdomen. Five pints drawn off by stomach tube with immediate relief. Recurrence of vomiting, and gastrostomy performed. The stomach was seen to be a flaccid bag extending into the pelvis. The distension involved the duodenum as far as its junction with the jejunum. Death occurred from exhaustion five hours later, and at the autopsy the stomach and duodenum were found to be almost normal in size. (3) Operation for ovarian cyst-adenoma. Frequent vomiting and distension confined to upper part of abdomen. Instant and complete relief after removal of 1¾ pints of fluid through a stomach tube. The condition might arise in eclampsia and the septicaemia of pregnancy. The features of the condition were gastric atony and hypersecretion. The extent of the distension in one case to the duodeno-jejunal flexure proved that in this instance it was not due to pressure of the mesenteric vessels at the point at which they crossed the duodenum. The vomiting was not accompanied by much retching. It was rather a welling up, and the fluid was frequently irritating, causing excoriations of the lips. If the case was seen early, it could almost invariably be cured by passing a stomach tube one or more times. Gastro-enterostomy, gastrostomy, and duodeno-jejunostomy had been tried.

Dilatations of the Graafian Follicle.

Dr. FREELAND BARBOUR and Dr. B. P. WATSON demonstrated by naked-eye specimens and lantern slides the formation of cysts in the ovary by the dilatation of Graafian follicles. They arose as a sequel to the non-bursting of the follicles, perhaps owing to a change in the tunica albuginea. Even in the absence of rupture, lutein cells were present in abundance. The time necessary for the development of such cysts was not yet known. In one specimen shown they had certainly formed within eighteen months. The PRESIDENT said the demonstration might prove helpful to the operating surgeon in deciding whether to remove or leave an ovary. He believed that the conservative surgery of the ovary was only in its infancy. Mr. SCOTT CARMICHAEL said that if the patient's complaint was pain, the ovary should be removed; if pain was not severe, it should be split open; if the cyst arose in a Graafian follicle, the ovary should be stitched up again and left. In one instance he had found that a cyst as large as a walnut had developed within three months.

Extreme Dilatation of the Tuberculous Tube.

Dr. FREELAND BARBOUR and Dr. B. P. WATSON also gave a lantern demonstration of the appearances of the tube in tuberculous pyosalpinx. Sections were made from three regions—the more dilated part, the less dilated part, and the uterine end. In the less dilated part there was an extraordinary development of epithelium resembling a carcinoma, and fusion of the processes projecting into the lumen of the tube. The secretion was mucoid in character, and increased in amount, distending the lumen. This represented the first stage in the reaction to the tubercle

bacillus. In the next stage the tube was lined by typical tuberculous granulation tissue, and nodules were plentifully scattered throughout the mucosa. In the third stage, found at the more dilated part of the tube, the muscle was covered with tuberculous granulation tissue containing fewer nodules, and the lining was composed of a single layer of epithelial cells. The contents were mucus mixed with tuberculous *débris*. This represented a process of healing. At the uterine end tuberculous nodules were absent from the mucous membrane, but were present in the muscular layer. These phenomena suggested that infection occurred through the fimbriated end from the peritoneum, and was gradually carried along the tube by the stream of fluid. Later the active process was found in the less dilated part of the tube nearer the uterus, while the outer part had begun to heal. In the specimens examined, infection had probably been carried to the muscle of the uterine end by lymphatics. The PRESIDENT said he had found tuberculous tubes thickened throughout. Mr. CARMICHAEL said he believed, from his experience of suppurative appendicitis and pneumococcal peritonitis, that infection of the tube from the peritoneum through the fimbriated end frequently occurred. Dr. YOUNG said that the intense proliferation of epithelium in response to the stimulus of the tubercle bacillus touched the question of the etiology of cancer.

MEDICAL SOCIETY OF LIVERPOOL.

Thursday, February 23rd, 1911.

Dr. T. R. BRADSHAW, President, in the Chair.

Lepra.

DR. FRANK H. BARENDT read a note on lepra, and exhibited a patient showing the macular type. After a brief reference to the nomenclature and history of leprosy, and its endemicity in Great Britain during the Middle Ages, he showed on the screen a typical case of the nodular type and contrasted the two forms of the disease. The patient, by birth a Scotsman, had acquired the disease a year before in South Africa. He first noticed a large anaesthetic patch on the anterior surface of the right thigh, and in the course of six months there appeared patches, varying in size, in the following sites: Right malar region, right side of nose, chin, and lower lip, left pinna, cubital regions, both hypothenar surfaces, and gluteal regions. He complained of pain and tingling in the affected areas. In October last he was admitted to the Tropical Ward of the Royal Southern Hospital under the care of Professor Ronald Ross. Nastin had been administered, but without benefit. Locally x rays had been used, especially to the right thigh, the site of the initial patch, and here a distinct improvement was noted. Leucocytosis was being produced, and nastin would be resumed and the results reported later.

Dr. GROSSMANN said that the appearance of the patient was not at all that generally met with in the macular form of leprosy. In his experience the colouring of the spots had never been such a deep reddish tint; in the white race they had been pale, mostly towards pink and purple; in the dark races pale, even to white. Nor had he ever seen such a swelling as the coloured part of the lower lip showed. It hardly looked like a mixed form of macular and nodular leprosy. As to treatment, he felt inclined to suggest in this case mercury in large doses.

Salvarsan in Tabes.

Dr. C. J. MACALISTER showed a patient suffering from tabes who had been treated by salvarsan with much benefit. The patient had acquired syphilis six years ago, the symptoms of tabes being first noticed four years ago. These were lightning pains, marked unsteadiness in gait, nocturnal incontinence, and loss of the knee-jerks, etc. In one eye there was old iritis and there were also several tertiary ulcers on the skin. On January 19th salvarsan was given intravenously. The injection was followed by some transitory constitutional disturbances. Manifest improvement followed the treatment. The pains, ataxia, and inco-ordination were greatly relieved; also disturbance of sensation was less marked and the patient was able to walk a considerable distance.

Dr. GORDAN GULLAN was not surprised at the improvement, since many cases of the disease were greatly benefited by mercury, if given in the early stages and continued for a long period.

Dr. WARRINGTON briefly mentioned the very divergent views that were held on the question of the antispecific treatment of tabes.

The Rôle of Reflex Inhibition.

Professor C. S. SHERRINGTON read a paper on this subject. A distinction was drawn between the inhibition which acted upon the skeletal muscles and that which acted on other muscles, such as heart, intestine, and blood vessels. In the latter cases the muscles were supplied with two kinds of nerves, excitatory and inhibitory, both nerves issuing as efferent from the central nervous system. In the case of the skeletal muscles no efferent inhibitory nerve was provided, but only an excitatory efferent, namely, the ordinary motor nerve. Nevertheless, inhibition played an even more potent and extensive rôle in controlling skeletal muscles than it did in regard to any other kind of muscle. Its mode of action was, however, always reflex, and it inhibited the muscle by inhibiting the histo-neurone which actuated the muscle. The main purposes which this reflex inhibition served in its control of skeletal muscles were as follows:—(1) It cut short the contraction of one set of muscles when another set was called into play. It thus helped, and indeed was an essential factor for, the transition from one reflex action to another. It also guarded and maintained a reflex already in operation by preventing its being interrupted by other stimuli which would disturb it; it did so by inhibiting the influence that those stimuli would otherwise produce on the nerve centres. (2) It graded the degree of intensity of the discharge from nerve centres by diminishing it to any required extent. When two afferent nerves, one excitatory and the other inhibitory, were concurrently stimulated, their effects could be so adjusted as to algebraically sum. In this way inhibition made itself apparent as a graduated moderating influence by which the required discharge from any motor centre could be adjusted with delicacy to any required intensity. (3) Reflex inhibition exhibited itself in the taxis of a number of important reflexes, such as those of stepping and respiration and eyeball movements, in a form known as reciprocal innervation of antagonistic muscles. In this, while the protagonistic muscle contracted the antagonistic relaxed, and the relaxation was due to central inhibition of the histo-neurones of the latter. This applied apparently universally to true antagonists, but not to pseudo-antagonists. Pseudo-antagonists were dealt with by identical innervations. (4) Inhibition was the main means by which rhythmic reflexes were produced. This occurred in the following way: To take, for instance, the rhythmic reflex of stepping—one phase of the rhythmic reflex was excited and then its very execution produced a stimulus which evoked a reflex inhibition, cutting that phase short and interrupting the action of the stimulus which excited it. The inhibition then was removed in virtue of the movement which caused it having under the inhibition lapsed. The original stimulus thus became operative again. And so the rhythmic reflex was maintained, rhythmically repeated inhibition being a main factor in its production. (5) Inhibition was followed on its withdrawal by a great augmentation of activity of the inhibited centre. This was called post-inhibitory rebound. This post-inhibitory rebound was responsible for one of the two phases of various diphasic reflexes, such as stepping, mastication, respiration, etc. Post-inhibitory rebound was very weak and irregular when the afferent nerves of the muscle had been destroyed. In other words, in tabetic muscles, or rather in tabetic spinal centres, the normal rebound occurred feebly or not at all. In the tabetic patient its place had to be taken by voluntary effort. (6) Strychnine had as its peculiar effect the conversion of reflex inhibition into excitation. Tetanus toxin and rabies virus had the same effect. These agents, therefore, worked havoc with the elemental co-ordination of the skeletal muscles, changing reciprocal innervations into identical innervations. Hence, in tetanus patients the greater the effort made to open the jaw the more tightly was the jaw closed, and in the hydrophobia patient the greater the attempt made by the sufferer to inhibit his inspiration in order to swallow, the deeper and more pro-

longed the inspiration which, contrary to his desire, ensued, inhibition being converted by the virus into excitation.

AT a pathological meeting on March 2nd, Dr. T. R. BRADSHAW, President, in the chair, the following were among the exhibits:—Mr. THELWALL THOMAS and Dr. STOFFORD TAYLOR: (1) A large intracanalicular *Fibroma of the breast* (weight 7 lb.) containing a cyst, removed from a patient aged 44; the fibrous tissue was undergoing myxomatous degeneration, and in one place had fungated through the skin. (2) A large round and oval celled *Periosteal sarcoma* of the scapula of a woman aged 20; an interscapulo-thoracic amputation had been performed. (3) A large *Cancellous exostosis* from the lesser trochanter of the femur in a patient who had fourteen others, small in size, distributed at the epiphyseal ends of many of the long bones. Mr. DOUGLAS CRAWFORD: (1) A right kidney with large *Branching calculus*, removed from a woman aged 65, producing no symptoms except occasional pus in urine. (2) *Volvulus* of lower end of small intestine, which had lodged in the pelvis, producing symptoms of appendicitis in a woman aged 31; it had been excised with excellent results. (3) (With Dr. MOORE ALEXANDER) An *Embryoma*, probably malignant degeneration of the remains of branchial cleft, from a youth aged 21, which had grown rapidly recently. Cysts were present. Microscopically, there were carcinomatous masses and tubes lined by ciliated epithelium. Dr. ERNEST GLYNN: (1) A specimen of cellulitis and suppurative thrombosis of the orbit due to *Actinomycosis*; pus was found in the sella turcica. The source of infection was not discovered. (2) Multilobular *Cirrhosis of the liver*, with multiple small old and recent red thrombi in the capillaries and smaller branches of the hepatic and portal veins. The cause of the thrombosis was not discovered. (3) Enormous *Dilatation of bladder* without obstruction from urethral stricture or enlarged prostate; the dilatation was proved microscopically to have resulted from chronic interstitial myositis following chronic cystitis. Dr. R. BUCHANAN demonstrated a method for the examination of red blood corpuscles by means of Edington's solution in combination with stains; the blood was mixed in a Thoma-Zeiss pipette with a solution, then placed on a slide and allowed to dry. The erythrocytes by this method did not undergo any distortion from spreading. He also read a note on the appearance of the erythrocytes from a case of recurrent attacks resembling Henoch's purpura for thirteen years. When examined by the method just described 90 per cent. of the erythrocytes from the peripheral circulation contained one or more peculiar basic staining bodies not unlike parasites. The blood in the urine contained identical bodies. Dr. WAKELIN BARRATT exhibited the technique of making models of cells undergoing mitoses. Dr. STEPHENS, in a paper on recent researches in *Sleeping sickness*, dealt with the following points: (1) Are there other species than *Trypanosoma gambiense* which cause sleeping sickness in man? He pointed out that some of the trypanosomes had a nucleus at the posterior end. This trypanosome was also far more pathogenic for animals than *T. gambiense*. It remained to be seen whether this trypanosome was really different from *gambiense*. (2) The mode of transmission of *T. gambiense*. Up till recently it was believed that the transmission was mechanical, but recent work had shown that the fly was not infective until twenty or thirty days after biting an infected person. (3) What is the reservoir of sleeping sickness? Probably antelope and cattle and some of the domestic animals must be regarded as potential reservoirs. (4) Is sleeping sickness curable? In the early stages it was practically certain that some cases had been definitely cured by arsenic or antimony used in various ways, but if the trypanosome gained access to the subarachnoid space it was doubtful whether a cure was possible.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, March 10th, 1911.

Dr. W. G. WILLOUGHBY, President, in the Chair.

Treatment of Phthisis by Industrial Insurance.

DR. T. D. LISTER, in a paper on the treatment of phthisis by industrial insurance, with special reference to the Benenden Sanatorium, said that the want of immunity on which consumption chiefly depended among the industrial classes was largely due to ignorance, to lack of sunlight, fresh air and ventilation, and to lack of a certain standard of ventilation. The educational difficulty was perhaps the greatest they had to face. The great mass of the tuberculous population was so familiar with the apparent inevitableness of consumption that it was difficult to persuade them that any alteration of their own habits was going to help them. Some could not even learn in a sanatorium itself. He urged the importance in any scheme for an industrial sanatorium of providing only the simplest domestic surroundings, with the sole addition of means for efficient treatment by hygienic methods. The luxuries in the way of architectural and mechanical contrivances to be found in some institutions were liable to confuse the mind of the patient, who on returning to his own small house was apt to think that his cure was in some way connected with the extraordinary facilities that existed in the sanatorium in which he had been treated. Taking into account the condition of those discharged from Benenden, 81 per cent. of those who left with the disease "arrested" were still doing full work from more than six months to more than two years after discharge, while 37 per cent. of those who left as "improved," and 7 per cent. of those who left "unimproved," were doing full work at the same periods after discharge. Dr. F. C. SHRUBSALL considered that if a suitable superintendent were chosen for a sanatorium the locality of the institution was a minor consideration. Elaborate methods of ventilation were not needed, for, except in inclement weather, the patients were exposed to the open air. A capable superintendent would teach the patients how they should conduct themselves when they returned to their own homes, even to the extent of teaching them how to feed themselves. Mr. C. H. GARLAND urged that the State should deal with the question of tuberculosis upon insurance lines, and he considered that the Edinburgh system might very well be applied to the whole country. Dr. J. S. TEW emphasized the importance of simplicity in the arrangements of a sanatorium, so that their patients' home conditions, when they returned there, would be similar to those of the institution. Dr. E. H. T. NASH spoke of the importance of impressing patients with the idea that they would be able to return to their own employments. Dr. C. SANDERS thought that the main question was not so much the treatment of the patient as of his family. Drs. J. R. KAYE, HERBERT JONES, W. BUTLER, and F. E. FREMANTLE also spoke.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

AT a meeting held on February 17th, 1911, Professor MUIR, President, in the chair, Dr. NAPIER described the *Treatment of phthisis pulmonalis* as carried out in his wards. Mr. MAYLARD showed a series of abdominal cases illustrating the following conditions: (1) *Congenital narrowing of the pyloric orifice* treated by gastro-jejunostomy. (2) *Hypertrophic stenosis of the pylorus* in the adult; pylorectomy with gastro jejunostomy for supposed malignant disease. (3) *Hour-glass contraction of the stomach* treated by gastro-gastrostomy. (4) *Intractable gastric neuroses* treated by exploratory gastrotomy. (5) *Tuberculous caecum*—excision and implantation of ileum into ascending colon by invagination. (6) *Carcinoma of colon*—excision—continuity established by intestinal invagination. (7) *Carcinoma of colon*—inoperable—short-circuiting by intestinal invagination in place of artificial anus. (8) *Acute intestinal obstruction*—faecal vomiting—evacuation of contents of intestine and introduction of magnesium sulphate into the bowel. (9) *Appendicitis with abscess*—appendicectomy and swabbing of abscess cavity with pure carbolic acid. (10) *Tuberculous peritonitis*—laparotomy—removal of fluid, and exploratory manipulation of parts. (11) *Uterine and ovarian tumours* removed by subumbilical transverse incision. (12) *Invagination of divided ureter into bladder.* (13) *Transperitoneal nephrectomy* by transverse incision. (14) *Lipectomy for pendulous abdomen and ventral hernia*—removal of 10 lb. 11 oz. of fat, by a 21-in. transverse elliptical incision. (15) *Abdominal cicatrices after transverse or oblique division of the rectal*

sheaths and recti muscles. Mr. PARRY showed cases to illustrate points in the surgical treatment of (1) *Torn cartilage in knee-joint;* (2) *Exophthalmic goître;* (3) *Fractures into joints;* (4) *Gangrene of gall bladder;* (5) *Duodenal ulcer.* Mr. GRANT ANDREW showed (1) cases of *Renal calculi,* with skiagrams; (2) two children suffering from *Infantile spastic paraplegia,* who, prior to orthopaedic treatment, were unable to walk; (3) an infant who had been operated on for *Congenital hypertrophic stenosis of the pylorus.* Dr. ROBERT CARSLAW showed (1) a patient operated on three months ago for *Perforation of pyloric ulcer* (excision of ulcer, pyloroplasty), who developed empyema suddenly after two months of good health; (2) Card specimens: (*a*) *Acute carcinoma of breast* removed from a young woman, aged 29; (*b*) *x* ray photographs of two cases of *Tuberculosis of the acetabulum,* with pathological dorsal dislocation of the head of the femur (photographs taken before and after operation). Dr. BROWN KELLY showed cases presenting the following conditions: (1) *Double abductor paralysis;* (2) *Pharyngeal and laryngeal nystagmus;* (3) *Cornu of hyoid projecting into pharynx;* (4) *Cicatricial stricture of oesophagus;* (5) *Submucous cleft palate;* (6) *Keratosis of pharynx and larynx;* and others. Dr. A. N. MCLELLAN showed (1) a patient operated on for *Extrauterine pregnancy of right tube,* in whom the left tube was distended with blood-stained fluid and closed; (2) a case of *Carcinoma of body of uterus;* (3) a case of *Fibroma of left ovary* with extensive adhesions to bowel and pelvic floor—large accumulation of fluid in pleural and peritoneal cavities, which was removed on several occasions by tapping—removal of tumour, followed by complete disappearance of fluid from both cavities; the patient was now in good health. Dr. ALBERT A. GRAY showed (1) microscopic sections showing the *Organ of Corti;* (2) microscopic sections showing the *Cochlea of a deaf-mute;* (3) microscopic sections from a case of *Oto-sclerosis;* (4) macroscopic specimen showing *Fixation of the stapes in oto-sclerosis;* (5) family tree showing the *Influence of heredity in oto-sclerosis.* Dr. HUGH WALKER showed some *Ophthalmic cases.* Dr. JOHN ANDERSON showed pathological specimens illustrating some of the *Enlargements of the kidney.* Dr. D. O. MACGREGOR showed a series of *Skiagrams* illustrative of various medical and surgical conditions

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on March 1st, Mr. W. MORLEY WILLIS President, in the chair, Dr. J. W. SCOTT, in opening a discussion on *Anaesthetics,* said that, as a prophylactic against chloroform poisoning, it was advisable to give glucose and sodium bicarbonate to patients who were passing acetone in their urine; also to avoid prolonged fasting and to wash out the rectum. Ether was safer than chloroform in its immediate effect, but more difficult to administer, and very often led to serious pulmonary complications. The open method was the best; he had frequently used it with children without causing any bronchitis. A mixture of chloroform and ether was the most satisfactory of all, as it maintained a more constant blood pressure. Dr. R. ALDERSON said he never limited himself to one anaesthetic, but preferred giving a mixture of ether and chloroform by the open method and varying the percentage according to the needs of the case. The open method did away with the objections of a Clover and rendered the patient less liable to post-anaesthetic vomiting. The mixture should be slowly given. Miss A. M. LE PELLEY found that emergency cases took anaesthetics well, and thought the ordinary preparation of patients was too drastic; operations should be performed, when possible, in the morning, and fright reduced as far as possible. As a rule, the temperature of the operating theatre was too high. Mr. KENNETH BLACK said he had seen thirty patients die on the operating table, twenty-three of these after chloroform. In all cases the cause of death was an overdose of the anaesthetic, some cases, of course, being more susceptible than others. Dr. T. B. GILBART-SMITH always started anaesthesia with A.C.E. mixture, and generally continued with chloroform. In abdominal operations the patients stood the operation better if deeply "under." Dr. A. WARING preferred A.C.E., and believed in giving as little as possible. He found heart disease no contraindication to giving an anaesthetic if it was administered slowly and carefully. Mr. R. G. HOGARTH preferred to have ether administered by the open method, but mentioned one case which was followed by acute bronchitis. Mr. R. WOOD (Ilkeston) always gave chloroform in midwifery cases with success. Mr. W. HUNTER preferred A.C.E., and regarded chloroform as most dangerous. He deplored the present system of newly qualified assistant house-surgeons being suddenly called upon to give, say, eight anaesthetics for major operations in a morning. Mr. H. BELL TAWSE said chloroform was the anaesthetic of choice in nasal cases, as ether caused so much haemorrhage. The PRESIDENT thought chloroform was perfectly safe in skilled hands; it was quite pleasant to take, and produced the best results from a surgeon's point of view. Drs. SCOTT and ALDERSON briefly replied.

THE NEW LONDON DERMATOLOGICAL SOCIETY.

AT a meeting on March 9th, Dr. PHINEAS S. ABRAHAM, President, in the chair, the following were among the exhibits:—Mr. DENNIS VINRACE: A man with *Traumatic alopecia,* simulating the senile variety, consequent upon a douche of boiling water to the scalp. Dr. TOM ROBINSON: A butcher, aged 46, with *Tuberculosis verrucosa cutis* upon the back of the hand, following a cut twenty-six years previously. Dr. DAVID WALSH: A girl, aged 9, with *Dermatitis herpetiformis.* The present attack had lasted for three months, and she had had a similar one two years ago. The lesions were grouped symmetrically, were recurrent, and accompanied by itching. Dr. MORGAN DOCKRELL: (1) A case of *Bazin's disease* in a woman aged 19. The disease had lasted four years, and was confined to the lower limbs. A discussion took place upon the relationship of this affection to tuberculosis. (2) A man, aged 31, with *Ul-erythema* of the scalp, the left ear also showing some signs of the disease. Dr. W. KNOWSLEY SIBLEY: (1) A man with *Psoriasis,* in whom the mucous surface of the glans penis was affected. (2) A woman, aged 31, with *Erythema bullosum.* The attacks had commenced at an early age, and now there were numerous scarred and pigmented lesions upon the back and limbs, many of the recent ones being bullous. At first sight the condition upon the chest resembled that seen in some cases of dermatitis artefacta. Dr. W. GRIFFITH: (1) For Dr. M. K. HARGREAVES, a woman, aged 25, with extensive *Favus* of the scalp and trunk, which had existed since childhood. She was under treatment with *x* rays. (2) The patient shown at the previous meeting with *Mycosis fungoides,* to show the improvement that had taken place with *x*-ray treatment. Dr. G. NORMAN MEACHEN: (1) A woman with *Ul-erythema* of the scalp alone; (2) a case of *Papulo-necrotic tuberculides (follicles)* affecting the calves of the legs and the backs of the hands.

ERRATUM.—In describing his case of Morgagnian cataract at the Ophthalmological Society of the United Kingdom, on March 9th, Mr. Johnson Taylor attributed the amblyopia to long disuse, and not to long disease, as stated in the account of the meeting at page 626 of our issue for March 18th.

THE third International Congress on the Hygiene of the Dwelling will be held at Dresden next October (2nd to 7th). Communications should be addressed to the General Secretary, Dr. Hopf, Reichstrasse 4 II, Dresden.

THE Prussian Chamber of Deputies has now before it the draft of a bill as to cremation. The bill as it now stands makes cremation lawful. Before a body can be burnt there must be produced the official death certificate, the medical certificate stating the cause of death, documentary evidence that the deceased expressed a wish that his remains should be cremated, and a certificate from the local police authorities of the place where the death occurred. These precautions are intended to remove any scruples concerning cremation, and to prevent suspicion that the death was due to violence. With regard to the medical certificate, it is provided that a *post-mortem* examination should be made if one of the doctors concerned in the case considered it advisable in order to ascertain positively the cause of death.

Reviews.

PATHOLOGY IN CLINICAL PRACTICE.

THERE is no department of medical science in which such rapid advances have been made in recent times as in pathology. So much that is comparatively new has come to be the established routine of everyday practice that a book embracing a comprehensive and intelligible survey of the present position of pathology in relation to practical medicine has become a need of the times. The opportunity has been seized by Dr. THOMAS J. HORDER, to whom the profession is indebted for a volume on *Clinical Pathology in Practice*,[1] which, we venture to think, will supply an admitted want. He sets before his readers a simply told account of recent pathological and bacteriological developments in terms of critical discussion that will commend themselves to all who desire accurate and reliable information on the latest discoveries and hypotheses by which modern laboratory research has brought within the scope of practical medicine new and promising methods of investigation, upon which depend important aids to accuracy in diagnosis, valuable assistance in the prevention of disease, and potent agencies for the cure or alleviation of many maladies.

Dr. Horder's volume is written in a commendable spirit of the strictest moderation, and with much wisdom he insists upon caution in drawing conclusions. Pathology is and must remain the handmaiden of clinical medicine, and no attempt to change the physician for the pathologist is to be encouraged; but Dr. Horder epitomizes the truth of the present position when he says that "to add to sound clinical observations the findings of the microscope and the test-tube sums up all the notable advances in medicine since the days of Laënnec. . . . The whole truth will never be found at the bedside, still less will it be found in the laboratory; the hopes of medicine lie in the close dependence of each field of observation upon the other."

He deals, *inter alia*, with such matters as the collection of material for pathological examination; blood culture; laboratory examinations of blood, sputum, urine, and faeces; the information to be gained from puncture of the pleura, spinal canal, lungs, joints, etc.; the value of specific serum tests in diagnosis; and vaccine-therapy. In these days when treatment by serums and vaccines has taken hold of the public imagination, and when, even by medical men, the limitations, and in many instances the problematical value, of such measures of therapeutic management are forgotten in the need for meeting, so far as may be, the popular demand, it is well to be reminded by such an authority as Dr. Horder that indiscriminate vaccinations or serum injections are non-scientific, and from the curative point of view worse than useless. In a reference to septicaemia, which may be taken as the type of disease against which this form of medication is mostly directed, he says that "treatment, whether by bactericidal serum or by specific inoculation, or by a combination of both of these, must depend for its success upon the isolation from the patient's blood of the micro-organism present, and at as early a stage of the disease as possible." Discredit and disappointment, if nothing worse, must attach to the introduction into the body fluids of serums or dead micro-organic cultures at haphazard.

A very careful account is given of lumbar puncture, and the diagnostic indications for its use are clearly stated. The technique of the little operation is accurately described; it is one which may safely be undertaken if the rules which Dr. Horder lays down are followed. Examination of the cerebro-spinal fluid gives us valuable information in many cases, and we owe much to Quincke for having added to our clinical resources the therapeutic and diagnostic guidance that is to be got from lumbar puncture.

It is now generally accepted that microbic activity at the orifices of the body, and especially in the nose, mouth, and throat, is responsible for many obscure forms of pyrexial illness, and though the air passages and the alimentary tract are the habitat of innumerable bacteria which under normal conditions of health are innocuous, no reliance can be placed upon a continuance of their benign characteristics. Dr. Horder points out, for example, that "the pneumococcus which is found in normal saliva, though a harmless inhabitant of the mouth and throat during health, may become highly injurious, causing serious diseases." This change is supposed to be due either to a more or less sudden attainment of virulence by the germ, or to a lowering of the vitality of the patient, or to both of these events. What is true of the pneumococcus is true also of the streptococcus. There is a strain of streptococcus constantly present in the normal mouth, *Streptococcus salivarius;* in normal circumstances it causes no disturbance of health. In the condition known as pyorrhoea alveolaris, however, this streptococcus is found to be definitely pathogenic, producing a series of morbid changes around the teeth with consequent disease. These and other instances which he enumerates indicate that too much reliance must not be placed upon microscopic appearances alone, and justify his warning that the bacteriological evidence in every case must be considered in the light of the clinical manifestations with which it is associated.

As regards vaccine-therapy, Dr. Horder frankly admits that it is still in an initial and tentative stage, and he points out that in the important question of dosage there are yet great differences of opinion and of practice. In his judgement no definite rules can be formulated, but he promulgates the following principle as a safe one for guidance: "The more virulent the micro-organism, and the more acute and the more generalized the disease process, the smaller should be the dose of vaccine employed." A statement so conservative coming from an authority so skilled justifies an attitude of extreme caution in regard to the therapeutic possibilities of a system which, though it possesses much of promise, is yet too youthful to justify unqualified confidence in its curative capacity except in carefully selected cases, or in circumstances where treatment which experience has taught us to trust proves ineffectual. The plan of using vaccines which are manufactured and kept in stock by wholesale chemists leads, as Dr. Horder warns his readers, to a temptation to waive the important preliminary of bacteriological diagnosis, and is liable, if resorted to indiscriminately, to bring vaccine-therapy into disrepute. He admits that there are instances in which the use of a stock vaccine is imperative, but he recommends that, as far as possible, "the particular vaccine used should be specially prepared for each patient." In regard to vaccine inoculation as an addition to our therapeutic armamentarium, he finally concludes that it "is not to be regarded as a panacea for all diseases which are of microbic origin. Still less is it to be regarded as a panacea for all diseases. It is a valuable adjunct in the medicinal and surgical treatment of bacterial infections." This seems to be a judicial and judicious summary of the correct attitude to adopt towards this latest development in curative medicine. We commend, with confidence, the perusal of Dr. Horder's volume to all who are concerned with the cure of disease. It is pleasantly written, conveys a large amount of practical experience temperately expressed, and may be taken as a safe guide to the legitimate and scientific application of serum-therapy and vaccine-therapy, as at present understood, to the cure of disease.

[1] *Clinical Pathology in Practice.* With a Short Account of Vaccine-therapy. By Thomas J. Horder, B.Sc., M.D., F.R.C.P., Medical Registrar and Demonstrator of Morbid Anatomy at St. Bartholomew's Hospital; Physician to the Great Northern Hospital and to the Cancer Hospital, London. London: Henry Frowde, Oxford University Press; Hodder and Stoughton. 910 (Demy octavo, pp. 224; 5 illustrations, 6 figures. 7s. 6d

FOOD INSPECTION.

THE methods of meat inspection adopted in this country are still admittedly behind those of some other European states, although in recent years more sustained attention than formerly has been paid to the subject in some districts. In the customary memorandum as to their annual reports which was addressed to medical officers of health by the Medical Officer of the Local Government Board in 1908 it was for the first time stated that the Board desired information as to meat inspection, disease in meat, and the condition of slaughterhouses in the various sanitary districts, and in the following year the memorandum contained a request that information on these matters should be given by medical officers of health, even though it could only be of a negative character. There are other indications that the central authority is fully alive to the need for improved methods of meat inspection, and local

authorities are giving practical effect to the desires of the central body by appointing trained men to carry out the necessary inspections. The training required is essentially practical, but hand in hand with this practical portion of the must be the acquirement of theoretical knowledge. To assist in this acquirement Walley's *Practical Guide to Meat Inspection* still holds a foremost place, and the fifth edition,[2] edited by Mr. STEWART STOCKMAN, has been so carefully revised and brought into accord with present-day views that its prominent position as a safe and reliable textbook stands in no peril. Mr. Stockman favours the central hall form of slaughterhouse in preference to the booth system, and he urges the necessity for a properly equipped laboratory in connexion with public slaughterhouses. He is very definite in his statement that inspectors should be scientifically trained, and that at present the veterinary surgeon is the proper person to act as a meat inspector.

In his handbook on *Food Inspection*[3] Dr. HUGH A. MACEWEN has dealt not only with meat, but with fish, poultry, game, vegetables, and fruit, though more than one-half of the work is concerned with meat inspection. The chapters on the inspection of live animals and on the method of inspection in the slaughterhouse are extremely well written, and contain numerous practical suggestions which cannot fail to be of service when applied by the inspector. Upon the different methods of slaughtering Dr. Macewen has not much to say. He gives a short description of Greener's patent killer, but no mention is made of the improved killer which has been introduced by the Royal Society for the Prevention of Cruelty to Animals, nor of Behr's pistol for killing small animals. We should like to believe that he is correct in the statement that before bleeding, pigs are, as a rule, stunned with a wooden mallet. Such is not the case south of the Tweed, though we are glad to learn that the Local Government Board has confirmed a by-law for the Corporation of Liverpool which provides that no person shall proceed to slaughter any bull, ox, cow, heifer, calf, or pig until the same has been effectually stunned. The greatest number as well as the most important diseases of animals, in Dr. Macewen's opinion, are bacterial in origin, and he considers that meat inspectors should have such a knowledge of the principles of bacteriology as will serve to guide them in the many problems involved in meat inspection. The forty pages devoted to a consideration of bacterial diseases should prove most helpful to the inspector, for after a general account of these diseases there follows a lucid description of special lesions. The sections on the law relating to unsound food and to slaughterhouses contain, for the most part, correct information. But in view of the decision of the High Court given in April, 1907, in the case of Goodwin *v.* Sale, it is not quite correct to say that slaughterhouse licences granted under the Towns Improvement Clauses Act, 1847, certain sections of which are incorporated in the Public Health Act, 1875, are granted once and for all. The decision referred to made it clear that such licences are personal and temporary licences, continuing in force only during the life or occupancy of the original licensees. In his preface the author states that he has constantly kept in view the needs of those working for the food inspectors' certificate of the Royal Sanitary Institute and other bodies. In this respect he has admirably succeeded, for he has employed the simple, terse language of a teacher, while he has shown a wise discretion in treating the most important aspects of his subject at sufficient length without sacrificing adequate mention of the less important.

After the disclosures concerning the slaughterhouses and stockyards of Chicago which were made a few years ago, it was confidently anticipated that permanent reforms would be carried out. That such has not been the case is asserted by Dr. ALBERT LEFFINGWELL in his work on American meat.[4] Dr. Leffingwell is a former President of the American Humane Society, so that he naturally lays some stress upon the opportunities for cruelty which are associated with the celerity with which living creatures are turned into food products in the Chicago packing houses. Sheep led by a little goat into the slaughter pen are caught by the hind leg in bunches of three and four at a time, passed on to the butcher, who cuts the throat, and then to a long line of assistants, each of whom has one thing to do. It is evident, says Dr. Leffingwell, that too little time is allowed for dying, and removal of the skin is, he thinks, almost certainly commenced before sensibility can have ceased. Other portions of the work deal with the methods of inspection of meat adopted in the United States, and instances are given of the facilities which are given for the evasion of inspection. One chapter is set aside for the consideration of the apparent increase in cancer among human beings and the incidence of the disease among cattle, the author advocating the condemnation of an entire carcass if any portion is affected by a malignant growth. The reforms advocated are the transference from the Board of Agriculture of the control of meat inspection and the marking with a descriptive label of canned meat and of lard which, though prepared from animals somewhat affected with tuberculosis or other diseases, or by injuries, has been subjected to processes believed capable of destroying all disease germs. Such a product, it is maintained should be marked as of inferior quality, and those products derived from animals altogether above suspicion should be marked as of first quality. A perusal of this work leaves us with an unpleasant feeling that the foreign meat regulations which were made by the Local Government Board last year have not been put into force too soon.

MEDICAL LEXICOGRAPHY.

PHYSIOLOGY is as subject to revolutions as a South American Republic; it has been estimated that the average expectancy of life of a theory is about ten years. In other departments of medical science the changes brought in by the whirligig of time, though not perhaps quite so vertiginous, are rapid enough to make it impossible even for the most determined reader of the scientific pemmican supplied by the journals to keep pace with them. Each step in advance entails a corresponding enlargement of medical terminology. This necessary evil is aggravated by the new words which many workers find needful to express their peculiar ideas. From these causes comes the ever-increasing output of medical dictionaries in recent years; the number of new editions of these that is called for at short intervals shows the keenness of the demand. Dr. GEORGE M. GOULD is the Johnson of medical lexicography. His various dictionaries, adapted to the needs of student, practitioner, and scholar respectively, have had a commercial success that of itself is sufficient to prove their practical usefulness. More than 200,000 of these works have been sold. The *Practitioner's Medical Dictionary*[5] is intended to supply the practitioner "with trustworthy definitions of such medical words and terms as he may need in his reading of standard medical textbooks, monographic or journalistic literature." How satisfactorily this object is attained is shown by the fact that a second edition has already been called for. Many new words have been included without increase in the size of the book.

Lippincott's New Medical Dictionary,[6] by Dr. HENRY W. CATTELL, is somewhat larger than that of Dr. Gould. On testing it here and there with reference to recent additions to medical science we have not found any omissions. In addition to illustrations of anatomical details, parasites,

[2] *A Practical Guide to Meat Inspection (Walley).* By Stewart Stockman, M.R.C.V.S., Chief Veterinary Officer to the Board of Agriculture and Fisheries. Edinburgh and London: William Green and Sons. 1909. (Demy 8vo, pp. 295; 79 figures. 10s. 6d.)

[3] *Food Inspection.* By Hugh A. Macewen, M.B., Ch.B.Glasg., D.P.H.Lond., D.P.H.Camb. London: Blackie and Son, Limited. 1909. (Med. 8vo, pp. 264, illustrated. 5s.)

[4] *American Meat and its Influence upon the Public Health.* By Albert Leffingwell, M.D. London: George Bell and Sons. 1910. (Cr. 8vo, pp. 220. 3s. 6d.)

[5] *The Practitioner's Medical Dictionary.* An illustrated Dictionary of Medicine and Allied Subjects, including all the words and phrases generally used in medicine, with their proper pronunciation, derivation, and definition; based on recent medical literature. By George M. Gould, A.M., M.D. Second edition. Illustrated. London: H. K. Lewis. 1911. (18s.)

[6] *Lippincott's New Medical Dictionary.* A Vocabulary of the Terms used in Medicine and the Allied Sciences, with their pronunciation, etymology, and signification, including much collateral information of a descriptive and encyclopaedic character. By Henry W. Cattell, A.M.Laf., M.D., U. of P. Freely illustrated with figures in the text. Philadelphia and London: J. B. Lippincott Company. (21s.)

apparatus, and so forth, there are portraits of Jenner, Pasteur, Lister, and other men who have moved the landmarks of knowledge. The aim of the book is described in the preface as being "to furnish the medical student, the practitioner of medicine, the laboratory worker, and whoever has occasion to use a medical dictionary, with a single volume of moderate compass . . . which shall attain the ideals of the user in regard to thoroughness, accuracy, perspective, and proportion." We congratulate the editor and the publisher on having successfully achieved their purpose.

The fact that Dr. GUTTMANN'S book, *Medizinische Terminologie*,[7] has reached a fourth edition shows that it supplies a definite demand. To German scholars it is likely to be very valuable, as the definitions are at once clear and concise. A useful feature is the insertion in the text of the names of distinguished workers, with a brief enumeration of their contributions to the sum of medical knowledge. The book includes the terminology of chemistry, physics, botany and zoology, and other allied sciences, as well as that of medicine proper.

EVOLUTION.

IN an extremely interesting little book entitled *The Coming of Evolution*[8] Professor JUDD has given a charming account of the eventful passages in the lives of Lyell, Darwin, Scrope, and Wallace, which led to the epoch-making changes of the middle of last century. Professor Judd had the privilege of knowing each of these men personally, and, indeed, of sharing what was to some extent a common friendship. When it is added that he possesses a fascinating literary style, it may be understood that the book is delightful, and our only disappointment is that it is so short. So much has been written about those men, however, and so much appears in their own writings, that we feel inclined to attribute it as an additional merit to Professor Judd that he has kept well within the limit of interest. With his skilful pen he gives a short but succinct account of the state of the natural sciences before the advent of Lyell and Darwin. The "Theory of the Earth" forms the main theme, and we are introduced to men whose names are now forgotten by all save a few, and who were ignored or even persecuted in their own time. Foremost amongst these, tribute is paid to the Scottish philosopher Hutton, who foreshadowed Lyell's views half a century before. The obscurity of his style, his uncompromising attitude, and the general trend not only of religious but of scientific thought at the time effectually overwhelmed Hutton. The brilliant work of Playfair, thirty years later, in support of Hutton was also swamped by the same current of adverse opinion, and it was only the irresistible genius and tact of Lyell that saved him from a similar fate. By that time, however, men's minds were more receptive, the glorious dawn of the scientific activity of the nineteenth century had just broken, there was a spirit of inquiry abroad and a search after demonstrable truth. In advancing his doctrine of gradual evolution as opposed to catastrophism Lyell was greatly aided by Scrope, whose fame has somewhat unjustly been overshadowed by that of his contemporary. Their ideas were opposed to those of all the eminent geologists living at that time, and the manner in which the innovators succeeded in their fight against the seemingly impregnable mountain of preconceived and fast-rooted opinions is an added testimony to their genius. That Lyell paved the way for Darwin there can be little doubt; that he exerted a strong influence upon him is beyond question, and there existed a lifelong friendship between the two men. Each had the most intense admiration for the other's powers; it was Darwin's chief aim to do what should please or interest Lyell, and the latter in turn was the willing friend and ready adviser of the younger man. The appearance of Russell Wallace on the scene added fresh lustre, and his self-abnegation lives as a type of the highest ideals in science. Professor Judd's intercourse with Darwin is very fully portrayed, and his picture of the great man, weighted by a chronic disease, grave yet cheerful, never relaxing from the laborious task to which he had set himself, is finely done. The idea of evolution, given concrete birth by Lyell, was moulded into shape and made to live by the patience and acumen of Darwin. We could have desired to set forth at greater length the charm of Professor Judd's little book, but to do so adequately would necessitate its reproduction *in toto*.

To effect a reconciliation between religion and science has been the object of many well-meaning and conscientious efforts, and it is to be regretted that not a few of these have been rejected both by the theologian and the scientist. *The Faith of an Evolutionist*,[9] by Dr. T. A. PALM, is one of the latest attempts to accomplish this task, and it is one which certainly deserves recognition and no small meed of praise. It is a short book, devoid of polemical redundancy, dealing only with simple and essential matters, and written in a pleasing style. It is indeed a sweet and charming faith that Dr. Palm expounds; moreover, it is consistent, and it contains little to which the most ardent devotee of the goddess Science would not subscribe with perfect freedom of conscience. The only difficulty is in the matter of interpretation, and on that point we are afraid neither Dr. Palm nor any of his successors will give entire satisfaction to all parties for quite a long time to come. Dr. Palm, in fact, is decidedly guarded. He believes in the evolution of religions, yet he would seem to hold that the Christian idea of God is a thing by itself, although it has been modified by the evolution of the Christian religion. He deals with the relation of evolution to the creation, to ethics, to the Christian belief, revelation, atonement, and to character. He argues that the facts of evolution do not invalidate the belief in the existence of a Divine mind and in a creation by design, but merely alter the conception of the way in which the Divine mind has seen fit to work and to shape things. The whole teaching of evolution, moreover, is altruistic, and is accordingly in agreement with the highest ethical ideals. The morals and ideals of any age supersede the lower code of a previous age, and give place in turn to the higher and nobler aims of the succeeding ages. The morality of to-day will fall far short of future ideals. The incarnation is somewhat boldly likened to a mutation, the appearance of a new type, and the atonement is regarded as the supreme instance of the struggle for existence, not of self, but that of others. In dealing with revelation the author argues very skilfully that the distinction between natural and so-called supernatural is merely relative to our ignorance, and the supernatural passes into the realms of the natural as our knowledge increases, and as increasing knowledge of the processes of thought affords a basis for the belief in inspiration and revelation. The concluding chapter—on character—is full of suggestion, and in fact the whole book is well worth reading.

NOTES ON BOOKS.

IN the 336 pages of his little book on *Garden Foes*[10] Mr. T. W. SANDERS describes every pest and every disease of any serious importance that are looked upon as foes by gardeners, and indicates the means of destroying or preventing them as far as these are known. Fruit, vegetables, flowers, and trees all come within the author's province. Insecticides and fungicides have not escaped his attention. Spraying and fumigation are fully discussed. Mr. Sanders does not confine himself to garden foes. A chapter is devoted to a description of the various friends—insect, animal, and bird—met with in gardens, which it is essential gardeners should be able to distinguish from the many foes described in the earlier chapters. The volume is profusely illustrated, most of the chief pests and diseases being portrayed. The book, which is clearly and pleasantly written, will be useful to all who take an active interest in gardening.

[7] *Medizinische Terminologie.* Ableitung und Erklarung der gebrauchlichsten Fachausdrucke aller Zweige der Medizin und ihrer Hilfswissenschaften. Von Stabsarzt Dr. Walter Guttmann, in Mulheim A. D. Ruhr. Vierte Umgearbeitete und erweiterte Auflage. Berlin und Wien: Urban und Schwarzenberg. 1911. (M.19.)

[8] *The Coming of Evolution.* By J. W. Judd, C.B., LL.D., F.R.S. Cambridge: University Press. 1910. (Fcap. 8vo. pp. 171. 1s.)

[9] *The Faith of an Evolutionist.* By Theobald A. Palm, M.A., M.D. London: H. R. Allinson, Limited. (Post 8vo, 159 pp. 2s. 6d.)

[10] *Garden Foes.* Insect, Animal, and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs, and Greenhouse Plants, with all the latest remedies for their eradication, etc. By T. W. Sanders, F.L.S., F.R.H.S. Illustrated. London: W. H. and L. Collingridge.

The concluding issue for last year of *International Clinics*,[11] a freely illustrated quarterly collection of papers of clinical interest, contains some twenty-six papers. Among those seeming specially worthy of note are a favourable review of the claims of salvarsan by the editor; one on the treatment of leukaemia by *x* rays by H. K. Pancoast; on the functional test of cardiac efficiency by A. D. Hirschfelder; on the technique, aims, and limitations of spinal anasthesia in the young by Tyrrell Gray; on the psychological interpretation and practical uses of hypnosis in medicine by J. Victor Haberman; on the law respecting compensation to workmen for accidents by John Glaister; and an elaborate consideration of the physical results produced in human bodies at the moment of contact by the missiles used with modern firearms by W. S. Wadsworth, the "coroner's physician" in Philadelphia.

Though anatomical models, however realistically executed, can never supply the place of the actual subject, they are useful for the purpose of furbishing up anatomical knowledge, which is apt to get rusty perhaps more quickly than any other branch of the varied lore acquired at the cost of so much labour by the student of medicine. The reproduction of dissections of various parts of the human body shown on a life-sized female model, issued by the Gresham Publishing Company,[12] with a descriptive index by Mr. Frederick Norman and Dr. W. G. Stone, is likely to be helpful to practitioners as well as to students, as it shows the interior of the uterus and its contents at the different stages of pregnancy. There are seven plates, all well executed, which will enable a doctor to refresh his memory of the relations of important parts at a time of need more easily and more practically than by reference to a textbook.

It is hardly a paradox to say that an Englishman cannot understand the Gothic architecture of his own country unless he knows something of the cathedrals of Northern France. No doubt many of the architects and the bishops, when the bishop was not also architect, and even the artificers came to England from Northern France, or were of French extraction, or knew France well, but this is not the whole explanation. The great churches with which the citizens of every important town between the Loire and the Tweed endowed posterity were the outward and visible signs of an inward and spiritual grace. The men who conceived and designed, the artificers who wrought and carved, and the citizens and peasants who found money and material believed with a singleness and simplicity which do not belong to this age. Very many of the men, women, and children who gazed on the *Beau Dieu* of Amiens or the thronged portals of Chartres could not read, and the sculptured doorways of these great churches have been called the bibles of the poor, for they tell the history of the prophets and saints of the Old and of the New Testaments. We believe that with many members of the medical profession church architecture is a hobby, and any man who knows the cathedrals of England will be well advised to make a holiday visit to Northern France. If he does so, he cannot do better than take Mr. Bumpus's *Cathedrals of Northern France*[13] as a guide, studying it beforehand, for the author not only gives short historical accounts of each cathedral and describes their plan and architecture, but deals adequately with all those great buildings, with the exception of those of Brittany, which are reserved for another volume. The book is illustrated by photographs which are sufficient to whet the appetite, and the fly-leaves have been utilized to show an outline map of the country and block plans of some of the chief churches.

[11] *International Clinics*. Edited by H. W. Cattell, M.D. Vol. IV. Twentieth Series. Philadelphia and London: J. B. Lippincott Company. 1910. (Medium 8vo, pp. 308. Annual subscription, 35s.)

[12] *Human Anatomical Model (Female)*. A Life-sized Reproduction of the Dissections of the Various Parts of the Human Body; showing the Relations of Internal Organs to one another, as well as the Interior of the Uterus and its Contents at the different Stages of Pregnancy. With a Descriptive Index by Frederick Norman, F.R.C.S Eng., and W. G. Stone, M.D.Oxon., F.R.C.S.Eng. London: The Gresham Publishing Company, 34 and 35, Southampton Street, Strand. 1909. (£2 5s.)

[13] *The Cathedrals of Northern France*. By T. Francis Bumpus. London: T. Werner Laurie. 1911. (Post 8vo, pp. 396. 6s.)

Among the bequests made by the late Sir Charles Rackham Gilman of Norwich were £300 to the Norfolk and Norwich Hospital, £200 to the Jenny Lind Infirmary at Norwich, and sums of £100 each to a number of Norfolk institutions, including the Norwich Eye Infirmary, the Children's Convalescent Home at Great Yarmouth, and the Convalescent Home at Norwich.

MEDICAL AND SURGICAL APPLIANCES.

A New Eye for Needles.

Mr. J. Lynn Thomas, C.B., F.R.C.S. (Cardiff) writes: I have had surgical needles made for me by Messrs. Shrimpton and Fletcher, Redditch, with the new eye I devised for ordinary needles some three years ago, and I have found them in practice to answer the purpose for which they were invented. The ideal requirements of an eye of a needle are not to be found in that which has been in general use from the dawn of the bronze age, and which has not been materially altered for many thousands of years. Many special eyes and special needles have been made during the last few years for surgeons and for blind people, but none of them, in my opinion, possess the following necessary essentials of an ideal eye: (1) Ease and simplicity in threading the eye; (2) means of fixing the sewing material in the eye to prevent it slipping when used single; (3) ease of unthreading. I have used for many

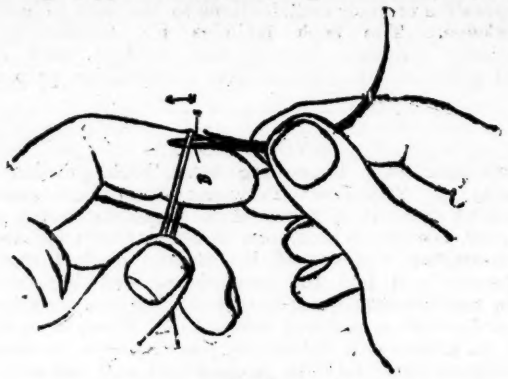


Fig. 1.

years: (1) The "Kratz" or calyx-eyed needles; the frequent slipping of the thread is its annoying drawback. (2) The "Reverdin" needle I have found extremely handy for certain work, but one must have a trained assistant in order to get the advantage in speed over that of the ordinary eye. (3) The "Doyen" eye; I have found the field for its use too limited owing to its large size and also to the rigid sides of the tapering lance-shaped eye not allowing gripping of the silk or thread. (4) The "Paterson" eye meets all the essentials of an ideal eye, but retains the drawbacks of the antique process of "threading the needle." (5) Every other variety of eye which I have tried, such as the lateral slot eye, or "side entrance spring-eye," possesses either a positive disadvantage as compared with the ordinary eye or an improvement which I am quite unable to appreciate. The eye to which I wish to draw attention has not only novelty in construction, which will be easily appreciated from the accompanying illustrations, but the method of threading the needle, which I find to be the best (see Fig. 1), perhaps ought to be described as "needling the thread," because the part played by the thread in the process is absolutely passive, which is a reversal of the part taken by the thread in the ordinary course of "threading the needle." A detailed description of the eye is rendered superfluous by the illustrations. It may be shortly stated that it possesses "a side entrance" with a "spring-grip"; that the projection against which the spring is checked is made prominent enough to be easily felt; and that the vanishing point between the spring, S, and the diminutive part of the body of the needle, B, allows any size of thread which can enter the "side entrance" to be firmly gripped between S and B. The makers have made for me ten different sizes of needles, with special forms for skin and hernia operations, and also some with Mr. Moynihan's curve, which has pleased me much, both in closing deep

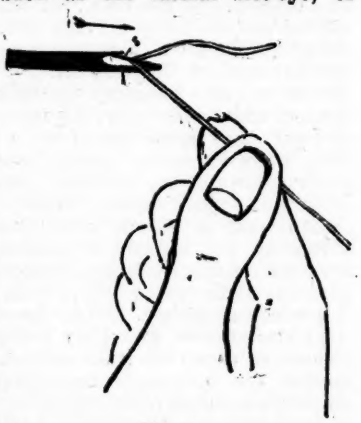
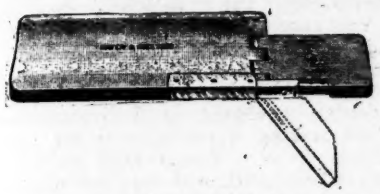


Fig. 2.

incisions and in restoring abdominal wounds in their normal stratified condition. The arrows in the illustrations indicate the direction of the movements of the needle in "needling the thread." In Fig. 1, the thread is being picked up, and in Fig. 2 it is being fixed.

Splint for Colles's Fracture.

Dr. G. M. DAWKIN (Pontypridd) writes: The drawing represents a splint I have designed for the treatment of Colles's fracture. The hand-piece of the front splint is locked by the brass slide; then the splints are padded and applied in the usual way, care being taken that the back splint does not go beyond the wrist-joint and that the hinge of the front splint just corresponds with the joint. The bandage must not go beyond the wrist-joint, and when fixed, a second bandage should be put on, extending to the fingers. When it is deemed desirable to move the wrist the second bandage should be removed and the brass slide pushed forward, which will allow the hand-piece to be turned back and the joint manipulated as desired. The advantages claimed for the splint are: (1) It secures movement of the joint without interfering with the fracture; (2) leaves the fingers free for voluntary movement; (3) deviates the hand to the ulnar border; (4) by being bevelled it corrects the displacement of the radius forwards; (5) can be applied to either arm. The splints are made in three sizes by Messrs. Mayer and Meltzer.



An Improved Stethoscope.

Dr. T. C. BLACKWELL (Oxshott, Surrey) has devised a stethoscope which he claims is mathematically and physically correct throughout. The combined sectional areas of the two smaller tubes are equal to the sectional area of the larger tube. The worm on the chest-piece is external; the diameter of the rubber tube is the same as that of the proximal end of the chest-piece; the latter has a knife edge, so that the constriction which ordinarily occurs immediately beyond the attachment of a rubber tube to a rigid tube does not take place; the three orifices of the "Y" tube have also knife edges. There is no lessening of the calibre at the junction of the tube and ear-piece. The opening of the latter is slightly larger than that of the tube, so that when placed in the ear there is no choking. The advantages of the instrument are that all exaggeration of the sound, and also any accentuation of a component of the sound beyond another are avoided, and

the exact sound produced is conveyed to the ear. Moreover, adventitious sounds are excluded with great ease. This is particularly noticeable in listening to the breath sounds. The convenience of the single tube is great. If the test recommended by Hutchison and Rainy in their *Clinical Methods* be applied, it will be found that the intensity of the sound—the ticking of a watch—is at least double that of an ordinary binaural instrument. The stethoscope is made by Messrs. Allen and Hanburys.

MEDICINAL AND DIETETIC ARTICLES.

"Hemisine" and Cocaine Injection.

THE employment of the vessel-constricting principle of suprarenal gland in combination with a local anaesthetic presents obvious advantages, and is now very general. A useful combination of this kind, intended especially for use in dental work, is supplied by Messrs. Burroughs Wellcome and Company (Snow Hill, London, E.C.), in the form of "Vaporole" hemisine and cocaine hydrochloride. "Hemisine" is the active principle of the suprarenal gland, and each vaporole contains $\frac{1}{2160}$ grain (0.03 mg.) of it together with $\frac{1}{3}$ grain of cocaine hydrochloride, in 1 c.cm. of liquid; the vaporoles are hermetically sealed and sterilized, and they are so shaped that each stands firmly on a foot before or after opening, which is a distinct convenience. The same solution is also supplied in bottles, holding 10 c.cm. each.

PROPOSED AMENDMENT OF THE DENTISTS ACT.

WE have received a copy of a draft bill, entitled "An Act to Amend the Dentists Act, 1878, and for Other Purposes in Connection therewith," and we are informed that the British Dental Association intends shortly to take a referendum with regard to its provisions. We have received also from the London and County Medical Protection Society a copy of a resolution passed at a meeting of the council of that society, on the unanimous recommendation of its Dental Committee, strongly disapproving of the bill, and urging its dental members to offer strenuous opposition to this or any other Act by which unqualified practice may be legalized. To this resolution considerable exception has, we understand, been taken by members of the British Dental Association, on the ground that the Act has been misread by the Dental Committee of the London and County Medical Protection Society.

In view of the fact that both the British Medical and British Dental Associations are actively engaged in elaborating bills for the betterment of medical and dental practice, and remembering the proposed Anaesthetic Bill, it is eminently desirable that no misconception should exist in the minds of members of either the general or specialized branch of the medical profession as to the meaning and probable operation of any proposed bill, and it will be well to indicate the essential features of the amendment to the Dentists Act proposed by the British Dental Association.

In the first place, it should be pointed out, with reference to the expression "promoted by certain members of the British Dental Association," used by the London and County Medical Protection Society in its circular, that the members referred to include eight out of ten immediate past presidents of the British Dental Association, and that they are supported by a large section of the members. The expression is perhaps unfortunate, but it at least indicates that dental opinion is divided as to the merits of the proposed bill. The essential portions of the bill are quoted below:

PART I.—PROHIBITION OF PRACTICE OF DENTISTRY BY UNQUALIFIED PERSONS.

1. *Penalty on Unqualified Person practising Dentistry.*—(1) Every person who (not being a registered Dentist or a registered Medical Practitioner or a person certified under this Act to be exempt from the provisions of this section) either by himself or in conjunction with others applies any dental treatment for or in expectation of any fee gain or reward or in any way practises dentistry or dental surgery for or in expectation of any fee gain or reward or holds himself out as competent to practise dentistry or dental surgery or as being engaged in the practise of dentistry or dental surgery shall be guilty of an offence against this section and shall be liable on summary conviction to a fine not exceeding £50 . . .

(3) . . . the expression "person" shall include any body of persons corporate or unincorporate.

2. *Exemption of existing Unregistered Dental Practitioners from Provisions of last preceding Section.*—(1) Any person who

(i) is of the age of 21 years or upwards, and

(ii) is at the passing of this Act and for a period of not less than five years immediately before the passing of this Act has been bona fide engaged in the practice of dentistry (such practice not being combined with any other occupation or calling) and is not a registered dentist or registered medical practitioner

may at any time before the expiration of six months from the passing of this Act apply if resident in England Wales or Ireland to the judge of the county court within the district whereof he resides or if resident in Scotland to the sheriff within whose sheriffdom he resides for a certificate that he is exempt from the provisions of the section of this Act the marginal note whereof is "Penalty on unqualified person practising dentistry." In this subsection the expression "the practice of dentistry" means the performance of dental operations upon and the application of other dental treatment and the giving of dental attendance and advice to dental patients.

(2) . . . Thereupon such judge or sheriff (as the case may be) if satisfied

(i) that the applicant is of the age of 21 years or upwards and

(ii) of the truth of the said declaration

shall write at the foot of or endorse upon each duplicate of the said declaration a certificate that the applicant is exempt as aforesaid in the form contained in the Second Schedule to this Act.

(3) One duplicate of the said declaration and certificate shall be preserved in the County Court or Sheriff Court (as the case may be) and the Registrar of the County Court or Sheriff Clerk

of the Sheriffdom shall deliver to any person applying for the same upon payment of the sum of 1s. a copy of such declaration and certificate under the hand of such Registrar or Sheriff Clerk (as the case may be).

(4) The other duplicate of the said declaration and certificate shall be delivered to the applicant.

3. *Avoidance of Certificate of Exemption.*—If a person who has been certified under this Act to be exempt from the provisions of the section of this Act the marginal note whereof is "Penalty on unqualified person practising dentistry" is convicted of an offence against any of the provisions of the Dentists Act 1878 as amended by the Medical Act 1886 the certificate of exemption granted to him shall as from the date of such conviction become and be by virtue of this section absolutely void and of none effect and all the provisions of the said section shall as from the date of such conviction extend and apply to such person in like manner as if he had never been certified under this Act to be exempt from the provisions of the said section.

Part II, 7, provides that every person practising dentistry, whether registered dentist or person exempted from the penalty for unqualified practice, shall in each year take out from the Commissioners of Inland Revenue a duly stamped certificate; the first certificate taken out by any person is to cost £1, any subsequent certificate £5; Subsection 8 specifies as part of the penalty for evasion of Subsection 7 inability to recover professional fees or cost of material supplied or used.

Part III deals with direct dental representation on the General Medical Council, and a dental board providing three such representatives, who are to be registered dentists elected by registered dentists.

Part IV, which it is not proposed to insist on, deals with a State dental examination.

In 1859 the Royal College of Surgeons instituted a voluntary dental diploma. In 1878 the Dentists Act was passed providing for the registration of qualified dentists, with the object of protecting the public by enabling it to distinguish between the educated and the uneducated. To this register were admitted not only qualified dentists, but all who could make good a claim to be at the date of the passing of the Act engaged in dental practice. By this Act the use of the title "dentist," etc, was restricted to those on the *Dentists Register* or *Medical Register*, but actual practice of dentistry by unqualified or unregistered persons was not prohibited. It now is, and always has been, legal for any person, qualified or not, to practise dentistry provided he does not assume the title of "dentist," etc.; those engaged in elaborating the Dentists Act of 1878 did not consider it expedient to ask the Government to interfere so far with "the liberty of the subject" as to prohibit entirely unqualified dental practice, whatever its evils. The recent decision of the House of Lords in the case of Bellerby *v.* Heyworth and Bowen clearly showed that the Act only prohibits the use of the title "dentist," etc., and the result has been an unprecedented increase in the number of unqualified practitioners who are now estimated at some 30,000, large numbers being utterly untrained and many of alien extraction. That a large body of untrained practitioners constitutes a serious public danger there can be no gainsaying, and, as will be gathered from the above extracts, the proposed bill aims at dealing with the evil by prohibiting dental practice by any but registered dentists and those unqualified persons who can show that they are "of age," and have been for five years engaged in bona fide dental practice at the time of passing of the Act. The source is to be dammed, and time is to deal with the existing evil.

The promoters of the bill seem justified in asserting that there is here no question of legalizing unqualified practice, since unqualified practice is not illegal; and it is further claimed that there is no question of a register or of registration of unqualified practitioners. They are to receive certificates of exemption from penalty, but they gain no right to vote as registered practitioners in the election of direct dental representatives on the General Medical Council. Further, they are to be made amenable to the provisions of the Dentists Act, 1878, as amended by the Medical Act, 1886. The controversy, in effect, ranges round the question of recognition of the unqualified practitioner. For thirty years the British Dental Association has maintained that the unqualified practitioner is a public danger; now, say the critics, you are ready to recognize, in fact to register, 30,000 of them! The promoters reply, Because vested interests and the liberty of the subject must be respected we recognize, but we do not register, nor do we give rights of registration, and in return we prevent any future addition to the ranks of the unqualified.

But is it true that there will be no registration of unqualified and no addition to their ranks? By Part I, 2 (3), a duplicate of the certificate is to be kept in the county court, and on payment of 1s. any person may obtain a copy thereof. The certificates are filed, and for purposes of reference constitute a "register." Further, Part II, 8, by prescribing as penalty for failure to take out a certificate inability to recover professional fee or cost of material, recognizes the right of a certificated person to recover such moneys—a right, at least as regards professional fees, hitherto denied the unqualified. So that both for purposes of reference and as conferring a special right this storing of certificates has, in fact, the effect of a "register."

Then as regards future additions to the ranks of the unqualified. The dental mechanic is indispensable. What is to prevent his making a set of teeth for any one who may ask him to do so? True, certain parts of the work must be done in the mouth, and the lines of the proposed Anaesthetic Bill may be followed by allowing such work to be done only under the supervision of a duly qualified (or registered) practitioner; but a very strong case must be made out to show that the fitting of artificial teeth by such persons is a danger to the public, and the possibility of future unqualified practice is obvious.

The opinion of counsel, published in the *British Dental Journal* (March 1st, 1911, p. 301), quoted below, shows how far in some people's opinion the proposed Act would be effective in preventing future additions to the ranks of the unqualified:

> There is nothing to prevent any individual—though not registered or certified—or any company from charging for dental materials, or goods sold and supplied—for example, an advertisement to the effect that "A. B. supplies and adapts artificial teeth. Consultations free. No charge made for attendance, advice, or treatment," would not subject the adviser to penalties under the proposed bill, or prevent him recovering for dentures or materials used in filling.
>
> ARTHUR W. SAMUELS, K.C.
>
> 80, Merrion Square, Dublin,
> January 17th, 1911.

Now, the spirit of the Dentists Act of 1878 was the protection of the public by ensuring that those practising dentistry were duly qualified (educated), and by the institution of registration to enable the public to distinguish between educated and uneducated. The spirit of this Act is being broken by a large number of men, though the letter is being observed. Instead of seeking legislation in the form proposed, it might be possible to ask the Legislature to insist on the spirit of the existing Act, at the same time providing that the unqualified now in practice shall be admitted *sine curriculo* to any final dental examination of the United Kingdom till the expiration of two years from date.

Yet another means of dealing with the question is to leave it alone, and let the unqualified multiply till they destroy themselves by their own competition, while raising continually the standard of medical education essential to the dentist, and unobtainable except at a medical school with the attendant cost in time and money, till the public appreciates the value of the educated dentist. Meanwhile the qualified and the registered men might well assert their rights, and at once distinguish themselves from the unqualified and unregistered by assuming on their door-plates the legitimate title "Dentist," "Dental Surgeon," or "Surgeon-Dentist."

Strenuous opposition to the proposed Act is to be expected from others besides those of the dental profession, who see no good to be gained by it. There is the Incorporated Society of Adaptors and Extractors, numbering some 3,000, with rules, organization, and funds of their own, which enabled them to give a very good account of themselves before the Coroners Committee; the National Dental Corporation, Limited, for registered and unregistered; a dental mechanics' union; all the unattached; and, finally, all those who have promoted or financed or own shares in dental companies.

MEDICINE IN THE "ENCYCLOPAEDIA BRITANNICA."[1]

FOURTH NOTICE.

HALLUCINATIONS are fully discussed by Professor McDougall. The subject is a difficult one, and it is not the fault of the author if the impression left on most people who are not specialists after reading his explanation of the phenomena may be conveyed in the words, "No light but rather darkness visible." A considerable amount of space is given to the researches of the Society for Psychical Research on apparitions and telepathy. Coleridge, when asked if he believed in ghosts, said that he did not—because he had seen so many. A similar experience would seem to be not uncommon. Of 17,000 replies to questions addressed to a number of people asking whether they had seen ghosts, or been touched by invisible things or heard voices, received by a committee of the Society for Psychical Research in 1889, rather more than 2,000 were in the affirmative. On further testing the statements of these persons, it was estimated that about 1 in 43 is the proportion of "coincidental death apparitions" to the total number of recognized apparitions among the 17,000 persons. Now, says Dr. McDougall:

> The average probability that any person will die within any given period of twenty-four hours' duration is about 1 in 19,000. Hence the probability that any other particular event, having no causal relation to his death, but occurring during his lifetime (or not later than twelve hours after his death) will fall within the same twenty-four hours as his death is 1 in 19,000—that is, if an apparition of any individual is seen and recognized by any other person, the probability of its being experienced within twelve hours of that individual's death is 1 in 19,000, if no causal relation obtains between the two events. Therefore, of all recognized apparitions of living persons, 1 only in 19,000 may be expected to be a death coincidence of this sort. But the census shows that of 1,300 recognized apparitions of living persons 30 are death coincidences, and that is equivalent to 440 in 19,000. Hence, of recognized hallucinations, those coinciding with death are 440 times more numerous than we should expect if no causal relation obtained; therefore, if neither the data nor the reasoning can be destructively criticized, we are compelled to believe that some causal relation obtains; and, since good evidence of telepathic communication has been experimentally obtained, the least improbable explanation of these death apparitions is that the dying person exerts upon his distant friend some telepathic influence which generates an hallucinatory perception of himself.

He adds that the committee could not find in the results of the census any evidence sufficient to justify a belief that hallucinations may be due to telepathic influence exerted by personalities surviving the death of the body. It may be gathered that to the famous questions of Truthful James—

> Are things what they seem?
> Or is visions about?

the learned author would reply, if we may borrow the style of the Roman Curia: To the first part, *Negative;* to the second, *Affirmative.*

Of William Harvey there is a good account from the erudite pen of Dr. Pye-Smith. The discussion of the question, often raised in recent years, whether Harvey was the true discoverer of the circulation of the blood, is a model of critical sifting of facts—brief, clear, and convincing. The only further remark we have to make is that in the list of biographies of Harvey given at the end of the article no mention is made of the most recent and not the least interesting of them, that by Mr. D'Arcy Power in the "Masters of Medicine" Series. The omission is the more noticeable since Mr. D'Arcy Power's work is dedicated to Dr. Pye-Smith.

The article on Hearing, by Professor McKendrick, is a lucid exposition of a somewhat abstruse subject. Dr. Parsons describes the anatomy of the Heart; a general view of its diseases is given by Sir John Broadbent; while all that need be said in a book intended for the instruction of the public as to the surgery of the organ is tersely set forth by Mr. Edmund Owen. Mr. Owen is also the author of an excellent article on Hernia.

In the article on Hippocrates it is stated that the "asclepia" of ancient Greece "were very carefully conducted hospitals for the sick possessing a curious system of case-books in the form of votive tablets left by the patients on which were recorded the symptoms, treatment, and results in each case." Hippocrates is said to have had these records at his command, and it appears to be implied that they were of some use to him as supplementing his clinical experience. Now, the "cures" in the Asklepieia were largely of the nature of faith-healing, and the records, not to speak it profanely, are like nothing so much as the testimonials one reads in modern newspapers to the marvellous virtues of Pilgarlic's pyrotechnic pills or Diddlem's elixir. It is not a little curious that the writer should take these things seriously, as he himself points out that Hippocrates was the first to dissociate medicine from priestcraft, and that his mind revolted against the use of charms, amulets, and incantations.

Dr. William Todd Helmuth, formerly Dean of the Homoeopathic and Medical College, New York, gives a very fair account of Homoeopathy, in which he states that Hahnemann borrowed his famous formula without acknowledgement from Paracelsus, and that modern homoeopaths have rejected his theories as to the origin of chronic diseases from psora, syphilis, or sycosis. He says:

> Most homoeopathists believe more or less in the action of minute doses of medicine, but it must not be considered as an integral part of the system. The dose is the corollary, not the principle.

The question of dose has, it seems, divided the members of the homoeopathic school into bitter factions. We agree with Dr. Helmuth that homoeopathy has had a salutary effect on medicine in some ways, but this effect has been indirect and can scarcely be looked upon as the outcome of Hahnemann's doctrine. If it taught physicians that the old drastic remedies formerly in common use were useless and often injurious, this was because homoeopathy with its infinitesimal doses proved that many diseases tend to get well without any drugs. It may be admitted that homoeopathy has done something to stimulate the study of the physiological action of drugs; for this more credit should be given than some of the "orthodox" are willing to allow. Nevertheless, if, as Dr. Helmuth complains, in the medical profession homoeopathy remains under the stigma of being a dissenting sect, that is surely the fault of its adherents. They would do well to follow the example of a well-known Nonconformist divine who announced *urbi et orbi* that he would wear no clothes (let no misguided comma intrude itself here or equivocation will undo us) to distinguish him from his fellow Christians. "Instead of which," to quote a familiar judicial oracle, homoeopaths seem to prefer to decorate themselves with a badge which, on Dr. Helmuth's own showing, has now ceased to have any particular meaning, and to hold themselves out as representing a "new school," differing fundamentally from that which they somewhat disingenuously call the "old." It cannot be too strongly impressed on the public mind that the rational physician is neither an allopath nor a homoeopath. Like Molière, he takes what suits him wherever he finds it. There is no such thing as a homoeopathic pathology, and there is nothing distinctive in homoeopathic surgery. The whole thing resolves itself, as far as theory is concerned, into a dogma, which—again on Dr. Helmuth's admission—may be traced back to Hippocrates, and which anyone may hold without incurring anathema; and in practice to the use of pilules and globules, credited with mystical properties which defy scientific analysis. There can, then, be no excuse for a homoeopath wearing a phylactery that may lead people to suppose that he is something different from an ordinary doctor. As a matter of fact Dr. Helmuth tells us that the American Institute of Homoeopathy, the national body of the United States, has adopted the following resolution, and ordered it to be published conspicuously in each number of the *Transactions* of the society:

> A homoeopathic physician is one who adds to his knowledge of medicine a special knowledge of homoeopathic therapeutics. All that pertains to the great field of medical learning is his, by tradition, by inheritance, by right.

He adds:

> It has been publicly announced that if the homoeopathists would abolish the name "homoeopathy," and remove it from their periodicals, colleges, hospitals, dispensaries, and asylums, they would be received within the fold of the regular profession.

[1] *The Encyclopaedia Britannica.* A Dictionary of Arts, Sciences, and General Information. Eleventh edition. Vols. I-XIV. Cambridge: University Press. 1910.

These conditions have been accepted by a few homœopathists who have become members of the most prominent medical association in the United States.

It is perhaps significant in connexion with this statement that the United States is the only country in which homœopathy really flourishes. Dr. Helmuth admits that it is not "rapidly extending" in Great Britain—a diplomatic phrase which Polonius might have called "good."

The article on Hospitals is contributed by Sir Henry Burdett. He lays stress on the great advantages to the patients afforded by the presence of students and nurses.

Nowhere else have the patients so continuous a guarantee that the treatment they receive will be of the best, while the provision made for their comfort and welfare, owing to the unceasing and ever varying quality of the criticism to which the work of everybody, from the senior physician to the humblest official, is subjected in a clinical hospital, is unequalled anywhere else. At a great voluntary hospital, not only do hundreds of medical students and nurses work in the wards, but thousands of people, in the persons of the patients' friends, and those members of the public who take an interest in hospitals, pass through the wards in the course of every year.

He makes a detailed comparison of the voluntary with the rate-supported hospitals, and carefully weighs their relative advantages and disadvantages. We give his conclusion in his own words without comment:

We should regard the establishment of a complete State-provided or rate-provided system of gratuitous medical relief either for in-door patients or for out-door patients, or for both, as a grave evil. Such a system must eventually lead to the extinction of voluntary hospitals. If this disaster ever happens, it must result in the gravest evils, for it could not fail to injure the morale of all classes and tend to harden unnecessarily the relations between the rich and poor, who, under the voluntary system, have come to share each other's sufferings and to be animated by respect and confidence towards each other.

Those interested in the hospital question will find food for thought in Sir Henry Burdett's article, whether or not they agree with his views.

THE FUNCTION OF VOLUNTARY HOSPITALS.

Mr. J. Courtney Buchanan, Secretary of the Metropolitan Hospital, has made a valuable contribution to the discussion of the question of hospital reform in an essay on *The Function of the Voluntary Hospitals in Relation to the Proposed Public Assistance Authority*.[1] He begins by showing that the reforms which may follow the reports of the Poor Law Commission are bound to have some effect on the voluntary hospitals, and dwells on the increasing difficulty there is in obtaining sufficient charitable subscriptions, which in itself will compel some radical changes. He is evidently opposed to any such municipalization of hospitals as would throw them on the rates and put the entire management in the hands of the local public authorities, as he considers it important to retain the voluntary principle. The overcrowding of the hospitals by unsuitable patients and by persons that could well afford to pay for treatment, the want of co-ordination with the public health authorities on the one hand and the poor law authorities on the other, the serious competition of the hospitals with general practitioners, are all in turn discussed in a very practical way, with a full appreciation of the rightful claims of both patients, consultants, and general practitioners. Special stress is laid on the keen competition that exists between the hospitals themselves in their endeavours to obtain subscriptions, and the author is evidently satisfied that the establishment of provident dispensaries, as suggested in the Majority Report of the Poor Law Commission, may with certain modifications be of the greatest benefit to the voluntary hospitals. He would entirely reverse the present system by which the hospitals refer patients to private practitioners or to provident dispensaries, as he holds that "it should not be possible for patients to attend at hospitals until they have been previously examined by medical men, and recommended by them as suitable cases for treatment at hospitals." It is further argued that "provident dispensaries, giving choice of doctors, who will be adequately remunerated, taking in all existing medical clubs, private and other dispensaries, would form the connecting link required between the voluntary hospitals and the various State, State-subsidized or rate-supported, or public assistance institutions." The hospitals, it is said, should not be places where patients can come at will, but patients should be obliged first of all to apply at the provident dispensary, and if they are unable to pay the charges of the dispensary they should be sent on to be dealt with by the authority which will perform the functions of the present relieving officer. In this way it is thought that the working of the provident dispensaries would bring general practitioners more closely into touch with the consulting staffs of hospitals to their common advantage.

Mr. Buchanan's main object would seem to be the establishment of a central hospital council. It is pointed out that the "three great funds"—King Edward VII Hospital Fund for London and the Metropolitan Hospital Sunday and Saturday Funds—have simply the power of the purse without any legal control. The central council he proposes ought "to be invested with full and general advisory and supervisory powers, and not mainly, as in the case of the King's Fund, with powers for the collection and distribution of money." Otherwise it should be constituted on the lines of the council of the King's Fund, and, if possible, under the patronage of the King. Among numerous other suggestions for the future administration of voluntary hospitals under this central council the following may be mentioned:

1. The function of the voluntary hospitals should be treatment by specialists.
2. Patients should be made to pay all they can afford for their treatment.
3. The provident dispensaries should be a kind of court of first instance maintained by the Public Assistance Authority, and tending to reduce the number of out-patients and to increase the work of, and benefit to, general practitioners.
4. The voluntary hospitals should remain independent of the Public Assistance Authority or the Poor Law Authority, as a supplementary service.
5. The work of classifying should be done in the provident dispensaries, and only patients should attend at hospitals who are recommended by their dispensary doctor or their medical attendant.
6. If voluntary subscriptions are not sufficient, the central council should have power to make grants, and in return should have power to control the erection of new hospitals, and so to supervise as to ensure efficiency, but without undue interference with hospital boards, each hospital being left free to develop its own peculiar characteristics.

Suggestions as to the constitution of the central council are made; and without necessarily expressing agreement with all the details of the scheme, it may be said that there can be no doubt that it would go a long way towards securing proper hospital reform and the co-ordination of voluntary hospitals with domiciliary treatment which is so desirable, while safeguarding the interests of both patients, consultants, and general practitioners.

[1] *The Function of the Voluntary Hospitals in Relation to the proposed Public Assistance Authority.* By J. Courtney Buchanan, Secretary of the Metropolitan Hospital, London. Second Edition; revised and enlarged. London: Bradbury, Agnew, and Co., Limited; and the Times Book Club. 1911. (Pp. 74. 1s.)

MOTOR CARS FOR MEDICAL MEN.

A Doctors' Edition of the "Motor."

Our contemporary the *Motor* devoted its issue for March 14th to a consideration of the special needs of medical motorists. The issue commences with an article in which Dr. Bernard Secretan sets forth what seem to him the advantages and attractions of using automobiles for professional purposes; then follow editorial descriptions and illustrations of a large proportion of all such cars as are considered by their makers to be specially suitable for medical men; similar treatment of car equipment and accessories; an article on motor insurance; one on the electric lighting of cars, and others on economizers and on the choice of a car. This "doctors' edition," issued at 1d., the habitual price of the *Motor*, contains much useful information, and is well worth acquiring.

M.D. writes: It may interest your correspondent who was inquiring about motor cars for medical men to know what has been my experience of a 10–12 h.p. two cylinder Swift car. I had never driven a motor car until I took delivery of this car at the works on June 12th, 1908. After being driven through the streets of Coventry I took charge of the car and drove it home. I have driven it ever since day by day in my professional work and occasionally for long-distance runs, and have, so far, never had an involuntary stop except for tyre trouble. The cost of running—including insurance but not including wages of man, who acts also as gardener—was £42 9s. 1d. the first year and £59 1s. 4d. the second. My stable expenses in the previous years averaged about £65, but with the motor I am able to do three times the mileage and still save time.

Nova et Vetera.

FRANCIS GALTON AS A MEDICAL STUDENT.

THE late Sir Francis Galton has bequeathed his residuary estate to the University of London, in furtherance of the study of national eugenics. This, as appears from his will recently proved, will amount to about £45,000. In a codicil to his will Sir Francis Galton describes the scope of his new foundation as follows:

I devise and bequeath all the residue of my estate and effects, both real and personal, unto the University of London for the establishment and endowment of a professorship at the said University to be known as "The Galton Professorship of Eugenics," with a laboratory or office and library attached thereto. And I declare that the duty of the professor shall be to pursue the study and further the knowledge of national eugenics—that is, of the agencies under social control that may improve or impair the racial faculties of future generations physically and mentally. And for this purpose I desire that the University shall, out of the income of the above endowment, provide the salaries of the professor and of such assistants as the Senate may think necessary, and that the professor shall do the following acts and things—namely:—

1. Collect materials bearing on eugenics.
2. Discuss such materials and draw conclusions.
3. Form a Central Office to provide information, under appropriate restrictions, to private individuals and to public authorities concerning the laws of inheritance in man, and to urge the conclusions as to social conduct which follow from such laws.
4. Extend the knowledge of eugenics by all or any of the following means, namely:—(*a*) professorial instruction; (*b*) occasional publications; (*c*) occasional public lectures; (*d*) experimental or observational work which may throw light on eugenic problems.

He shall also submit from time to time reports of the work done to the authorities of the said University.

I also declare that the said University shall be at liberty to apply either the capital or income of the said moneys for any of the purposes aforesaid, but it is my hope that the University will see fit to preserve the capital thereof wholly or almost wholly intact, not encroaching materially upon it for cost of building, fittings, or library. Also that the University will supply the laboratory or office at such place as its Senate shall from time to time determine, but preferably in the first instance in proximity to the Biometric Laboratory. I state these hopes on the chance of their having a moral effect upon the future decisions of the Senate of the University, but they are not intended to have any legally binding effect whatever upon the freedom of their action. And I declare that it shall be lawful for the Senate of the said University, if they shall think fit so to do, to postpone the election of the first or any subsequent professor of eugenics for a period of not exceeding four years from the date of my death, or from the date of the occurrence of any vacancy in the office as the case may be. . . .

I declare it to be my wish, but I do not impose it as an obligation, that on the appointment of the first professor the post shall be offered to Professor Karl Pearson, and on such conditions as will give him liberty to continue his Biometric Laboratory now established at University College.

In 1904 Galton endowed a Research Fellowship in the University of London for the promotion of the study of national eugenics, and in 1907 a laboratory for its prosecution was established at University College.

Francis Galton was originally intended for the medical profession, and gives an interesting account of his experiences as a medical student in his *Memories of My Life*, published by Messrs. Methuen and Co. in 1908. The whole chapter (iii) in which he records these experiences is worth reading; here only a brief summary can be given.

He says it was strongly desired by both his parents that his profession should be medicine, like that of his mother's father, Erasmus Darwin, F.R.S., and her half-brother, Robert Darwin, F.R.S. They acted largely on the advice of Mr. Hodgson, who had brought Galton into the world, and who, after acquiring a high reputation as a surgeon in Warwickshire, left Birmingham and settled in London, where he was President of the College of Surgeons in 1864. In 1838 it was arranged that Galton should accompany William (afterwards Sir William) Bowman, the famous ophthalmologist, who was going for a tour of a few weeks abroad, partly for vacation, partly to see certain medical institutions. In the autumn of 1838 Galton took up his abode as indoor pupil in the Birmingham General Hospital, Snow Hill. His immediate chief was the house-surgeon, Mr. Baker, who ultimately gained considerable repute as a surgeon in Birmingham. At first he was set to work every morning to help in the dispensary. He learnt to do most of his work pretty well in a few weeks, after which he was promoted to higher things. The duties gradually imposed upon him were to go with the surgeons on their morning rounds, always to attend in the accident room, where persons suffering from accidents were received whether in the night or the day, and to help in dressing them; also to be present at all operations, and to take part at every *post-mortem* examination; of such examinations there were perhaps two or three weekly. At that time the stethoscope was considered generally to be new-fangled; the older and naturally somewhat deaf practitioners pooh-poohed and never used it. Here Galton makes a characteristic suggestion. He says:

I cannot understand to this day why youths selected for their sharp hearing should not be so far instructed as to be used by physicians, much as pointers and setters are used by sportsmen. They could be taught what to listen for, probably by means of some sound-emitting instruments more or less muffled, and how to describe what they heard. A patient during the incipient stage of his disease might be submitted to examination by one or more of these quick-hearing youths, who would report to the doctor, who thereupon would form and express his opinion. Similarly as regards touch, of which great delicacy is of the highest importance. Conceive what help might be given them in discovering deeply seated tumours, abscesses, and much else. The touch of a person far less sensitive than that of the wandering princess of the well-known fairy tale might prove of vital importance. It will be recollected that her princess-ship was acknowledged by all, through her discovering a pea surreptitiously inserted as a test below the bottom of the pile of feather beds on which she slept.

After describing the ordinary work that fell to his lot as a dresser, he described a case of serious accident brought in at night, which gives a good picture of early Victorian surgery. The patient was a man, a small piece of whose skull had been depressed by something falling on his head and stunning him.

He was brought in utterly unconscious, with the "stertorous" respiration characteristic of such cases. The man had to be trepanned, so the surgeon was sent for. In the meantime everything was prepared for his arrival. The trepan is a hollow steel cylinder with teeth cut out of its lower rim, used to saw a circular wad out of the sound bone nearest to the fracture. A miniature steel crowbar is used to raise the depressed fragment, and a rod to lay across the sound bone as a fulcrum, for the crowbar. I seem to see it all before me as I write. The brightly lighted room, the apparatus in order, the surgeon at work, the eager faces of the bystanders, and the utterly unconscious patient. The wad was cut out, the crowbar adjusted, and still the monotonous snore continued unchanged. Then pressure was put on the free end of the crowbar, the broken bit of skull was raised, and instantly life rushed back. The man continued a sentence that he must have begun before the accident; then he stared wildly, and said, "Where am I?" The clock of life had stopped through a temporary obstruction, the obstruction was removed and the clock ticked on as before. He was soothed, a silver plate was inserted over the hole, the scalp was replaced and stitched together, and he was sent into the ward. In due time he wholly recovered, the scalp having grown over the plate.

Galton says it was a surprise to him to notice so few signs of pain and distress in the wards, even among the mortally stricken. He met with no instances of terror at approaching death, while the ordinary interests of life seemed powerful up to the close of consciousness. He goes on to say that the opinions held by the students about the several physicians and surgeons were curiously guided by a mixture of loyalty and irreverence.

There was no doubt of the fact that M., one of the doctors who never professed or had a claim to scientific acquirements, got his patients out of hospital more quickly than any of his colleagues. His treatment was as simple as that of Dr. Sangvado, though of quite another kind. It consisted of a strong purgative followed by low diet, and a subsequent feeding up as soon as all fever had gone. The composition of his drench never varied; a big bottle of it was made every morning in the dispensary, in readiness to be served out. It was so cheap that the overplus could be thrown away and a fresh infusion made the next day.

Galton expresses the wish that some "index of curative skill" could be awarded to doctors, based on their respective hospital successes. He tells us that he often amused himself with imaginary schemes to this effect.

If it could be compiled truthfully, it would be an excellent guide to those who wanted a doctor but were doubtful whom to consult. A high index of curative skill would serve as a measure of merit, and the fee to the doctor might be regulated by its height.

The following incident in those pre-chloroform days set Galton thinking:

A powerful drayman was brought in dead drunk, with both his thighs crushed and mangled by a heavy waggon. They had

to be amputated at once. He remained totally unconscious all the time, and it was not until he awoke sober in the morning that he discovered that his legs were gone. The question that then presented itself to me was, "Why could not people be made dead drunk before operations? Could it not be effected without upsetting their digestion and doing harm in other ways?" The subsequent discovery of *inhaling*, instead of drinking the intoxicating spirit, whether it be chloroform or ether, solved that question most happily.

As a matter of fact we believe that in the days before anaesthesia patients who had to undergo severe operations were not seldom stupefied beforehand with alcohol. Galton noted that different persons feel pain with very different degrees of acuteness. He gives instances which he had an opportunity of observing in later life. In 1851, when about to start from a mission station on his exploration of Damaraland, he saw two women who had escaped from a raid on a branch missionary outpost twenty miles off, in which most of the people had been murdered. Each of the women had had both feet hacked off in order that the raiders might secure the heavy copper rings on their ankles. In this mutilated state the two women crawled the whole of the twenty miles. The stumps had healed when Galton saw them. When asked how they stanched the blood, they explained by gesture that it was by stumping the bleeding ends into the sand, and they grinned with satisfaction while they explained. Later, when Galton was President of the Anthropological Institute, numerous instances were given of indifference to pain. The one that most impressed him was related by Sir James Paget, who had received it from a trustworthy authority. At the time referred to it was the height of fashion for Maoris to wear boots on great occasions, and not appear barefooted. A youth had saved money with which he bought a pair. When he tried to put them on he found that one of his feet had a long projecting toe which prevented it being thrust home. He calmly took a billhook, and, putting his foot on a log of wood, chopped off the end of his long toe and drew on the boot!

Galton was so keen about his work that, being desirous of appreciating the effects of different medicines, he began by taking small doses of all that were included in the *Pharmacopoeia*, commencing with the letter "A." It was, he dryly remarks, an interesting experience, but had obvious drawbacks. However, he got nearly to the end of the letter "C," when his scientific enthusiasm was checked by the effects of croton oil.

We next find Galton at King's College. While attending the classes there he was an inmate of the house of Professor Richard Partridge, whom he describes as at that time a brilliant man of about 34 years of age, yellow haired, full of humour and of quips, as well as of shrewdness and kindliness. He had known Charles Lamb well. Under his roof Galton spent a happy time. All the professors whose lectures he had to attend were notable men. His studies at King's College, he says, had much the same result in opening the mind that a similar experience must have on every keen medical student. He did pretty well in his work. His chief competitor was George Johnson, afterwards Sir George, whose thoroughness of work and character he admired. He was first in physiology, Galton coming in second. The only prize Galton ever got all to himself was in forensic medicine, a subject in which he delighted. He says:

> It had a sort of Sherlock Holmes fascination for me, while the instances given as cautions, showing where the value of too confident medical assertions had been rudely upset by the shrewd cross-questioning of lawyers, confirmed, what I was beginning vaguely to perceive, that doctors had the fault, equally with parsons, of being much too positive.

Speaking of the advance of medical knowledge, Galton says there is still much lack of exact knowledge of what Nature can do without assistance from medicine, if aided only by cheering influences, rest, suggestion, and good nursing. He expresses the wish that hospitals could be turned into places for experiment more than they are. Suppose, he says, two different and competing treatments of a particular malady: let the patients suffering under it be given the option of being placed under Dr. A. or Dr. B., the respective representatives of the two methods, and the results be statistically compared. A co-operation without partisanship between many large hospitals ought to speedily settle doubts that now hang unnecessarily long under dispute. He adds:

> Medical statistics are, however, the least suitable of any I know for refined comparisons, because the conditions that cannot be, or at all events are not taken into account, are local, very influential, and apt to differ greatly. It is, however, humiliating to find how much less has failed to attract attention for want of even the rudest statistics. I doubt whether the unaided apprehension of man suffices to distinguish between the frequency of what occurs on an average four times in ten events and one that occurs five times. Much grosser proportions have been wholly overlooked by doctors.

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As to rules of diet, the changes are ludicrous. Robert Frere, one of my fellow-pupils when with Professor Partridge, became through marriage in later years a managing partner in a very old and eminent firm of wine merchants. They had supplied George IV with his brandy and the like. He told me that the books of the firm showed that every class of wine had in its turn been favoured by the doctors.

In 1840 Galton went to Cambridge, where he attended a few lectures by Dr. Haviland, in order to obtain some more of the necessary certificates to qualify him for obtaining a doctor's degree. After he left Cambridge he was for a short time a pupil at St. George's Hospital, where he says he attended the lectures in a desultory way. In 1844 his father died, and with that event the direction of Galton's life changed. He abandoned all thought of becoming a physician, but he says he felt most grateful for the enlarged insight into Nature which he had acquired through medical experiences.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE St. Patrick's Festival dinner of the Irish Medical Schools' and Graduates' Association was held at the Hotel Cecil, London, on March 16th, with Sir CHARLES CAMERON, the President, in the chair. Covers were laid for nearly 300 guests, and the proceedings throughout were marked by the utmost enthusiasm, the presence of ladies adding to the charm of the evening.

After the usual loyal toasts had been duly honoured, Dr. Samuel Hamilton was presented to the Chairman by Dr. Crampton to receive the Arnott Memorial Medal. Dr. CRAMPTON described the heroic act performed by Dr. Hamilton in the catastrophe known as the Newport Dock disaster. At this disaster the sides of an enormous trench fell in and overwhelmed many men. Dr. Hamilton, in imminent risk of his life, descended into the trench and attended to the wounded, in one case performing an amputation which was finished just in time before the tide rose in the trench. In response to the loud cheers and calls of the guests for a speech, Dr. HAMILTON acknowledged the honour conferred upon him in a few modest and manly words, for which he was loudly applauded.

The next toast was that of "The Royal Colleges"; it was proposed by Dr. H. MACNAUGHTON-JONES, who gave an interesting sketch of the origin of the respective corporations of the three divisions of the kingdom, and their relation to the different chartered bodies which had previously existed. The earliest incorporation was that of the Irish Guild of Barbers in 1446, though in 1303 a Company of Barbers existed in London, and the earliest incorporated Royal College was that of Edinburgh (1505), closely followed by the English College in 1518. In touching on the history of the Irish College of Surgeons, he urged the injustice it suffered through the altered condition of education in Ireland that had followed on recent legislation. The endowments by the State of competing institutions had placed the College at an unfair disadvantage. The depleted funds of the College did not enable its school to keep pace with modern medical advance. Consequently, numbers left Ireland to study and qualify elsewhere who would otherwise have preferred the diploma of the Irish College. Also, the grants to the new National University and affiliated colleges placed the College of Surgeons' school and its teachers at a great disadvantage with the schools of the university. There were precedents for a State endowment, for from 1784 to 1808 the Irish College had received nearly £30,000 through State grants. It had never been tainted by

politics or sectarianism. The Royal College of Surgeons of England, when the matter was brought before its Council, had been most sympathetic, and under the presidency of Sir Henry Morris had responded in warm terms, expressing its hope that this just complaint might be rectified. Dr. Macnaughton-Jones hoped that the promise of the Premier would be kept: that if it should prove that in the working of the new system the Royal College of Ireland suffered, the Treasury would not be indisposed to consider favourably the application of the College to place it in a satisfactory position. The Chairman might take back to the parent college in Dublin the assurance of the undiminished loyalty and reverence of the members of the Irish Medical Schools' and Graduates' Association, both in London and throughout the provinces, and their willingness at all times to do everything in their power when called upon to assist it.

Sir THOMAS BARLOW, in responding to the toast, referred in sympathetic terms to the views set forth by Dr. Macnaughton-Jones, and in a few well-chosen words acknowledged the compliment paid to the Colleges.

Dr. J. A. MACDONALD in proposing the toast of "The Guests" voiced the feeling of regret of the members of the association at the absence of the Duke of Abercorn owing to illness.

Sir JAMES DEWAR in a felicitous speech replied to the toast, and amused the company with Irish stories told in an inimitable manner.

Sir JAMES CRICHTON-BROWNE then submitted the toast of "The Association," and his polished periods, which were distinctly heard throughout the enormous dining hall, held his delighted audience so mute that the proverbial pin might have been heard to drop. He complimented the Irish on possessing the dash of imagination that was always such a valuable auxiliary in the practice of medicine.

After the PRESIDENT had spoken in reply,

Professor THOMPSON gave the toast of "The President," which was suitably acknowledged.

The proceedings terminated with a cordial vote of thanks to the officers of the association, submitted by Dr. JAMES STEWART, and replied to by Dr. DOUGLAS, one of the honorary secretaries.

"QUALIFIED OPTICIANS."

THE MANCHESTER AND NORTH OF ENGLAND OPTICAL SOCIETY.

'DISEASES OF THE EYE" was the subject of an address delivered recently before the members of the Manchester and North of England Optical Society by Mr. J. C. KIDD, pharmaceutical chemist, and President of the society. The subject, he said, a few months ago would have been considered outside their province as opticians to discuss. But it behoved them to safeguard themselves from malicious prosecution by acquiring as much knowledge as they could of the commoner diseases of the eye which they were likely to meet with in everyday experience, in order that they might avoid the traps of what he described as "medical philanthropists." Before proceeding to test the refraction, much time could often be saved, and valuable information obtained, by making a few external observations, asking a few questions, and allowing the patient to give a history of the case. Among the points to be observed were the conditions of the eyelids, the lacrymal points, and the neighbourhood of the tear sac. Then the eyelids might be turned over and the inner surface examined. Following this the cornea should be examined by focal illumination, as well as the iris and lens. Those who were able to use the ophthalmoscope could then proceed to examine the fundus. Diseases of the eyelids, he said, might appear to some to be a little outside the consideration of the refractionist, but as in many cases they might be either a cause or a symptom of impaired vision, it was well to pay some attention to them. At considerable length Mr. Kidd dealt with various diseases and affections of the eyes, describing their causes and diagnoses. The different forms of cataract, he said, could all be diagnosed by focal illumination or by ophthalmoscope. Slight milkiness of the lens in old age must not be mistaken for cataract. As primary acute glaucoma might be mistaken for iritis, Mr. Kidd enumerated and contrasted the symptoms.

A short discussion followed the address, and at the conclusion a vote of thanks was passed to Mr. Kidd, who, in responding, said that, whilst it was no business of the optician to treat diseases, it was highly desirable he should be able to distinguish them.

It was decided that a mass meeting of opticians be held in Manchester next month, when the aims and objects of the National Federation of Ophthalmic Opticians would be explained by delegates. A meeting of opticians will probably be held in Liverpool on the following day to consider the question of forming there an Optical Society to be affiliated to the Federation.

ACTION FOR NEGLIGENCE AGAINST AN OPTICIAN.

The action, Markham *v.* Abrahams, heard before the Lord Chief Justice and a special jury on March 16th and 17th, raised questions as to the duties and liabilities of an optician. The following notes are founded upon the report in the *Times:*

According to the opening statement of counsel plaintiff was a young lady who, in 1907, was preparing for an examination to qualify as a science teacher. Having trouble with her eyes and suffering from pain, dizziness, and difficulty in reading she went to the shop of the defendant, Thomas, who carried on business under the style of Wood Abrahams, in Manchester, who described himself as an "eyesight and spectacle specialist" and a "qualified optician," of London, and stated that his "consulting hours" were from 9 a.m. to 6 p.m. One of the defendant's assistants prescribed spectacles, but not finding them satisfactory she returned on more than one occasion, and in 1909 was seen by the defendant himself. In that year she consulted an ophthalmic surgeon, who found that she was suffering from conical cornea of long standing; she had to abandon all hope of a career as a teacher. It was submitted on behalf of the plaintiff that if the defendant had exercised reasonable care and was possessed of reasonable skill he must have seen that it was a case of disease and not one of ordinary short sight. The defendant had represented himself as a specialist, and was bound to show reasonable care and skill as such, and could not now avoid liability by saying that he was merely a tradesman engaged in the sale of spectacles.

The plaintiff gave evidence in support of counsel's statements. In cross-examination she said that the only sums she paid the defendant was 25s. and 15s. 6d. for the spectacles and glasses he supplied to her; the glasses had been altered without charge; the assistant she saw on the first occasion told her that she was suffering from astigmatism.

Mr. Charles Wray, F.R.C.S., said that the existence of the disease conical cornea was easy to discover. It was essential to be extremely careful in the selection of glasses, and to forbid reading, writing, and all work at reading distance; astigmatism was always present in conical cornea. When the plaintiff consulted him in November, 1909, he formed the opinion that she must have had conical cornea for at least eight years. In cross-examination, he said that it was not true that he had long held a strong view that no optician should be allowed to prescribe spectacles. Conical cornea was a rare disease, and perhaps one in a thousand of his eye patients had it. The only fault he found with the spectacles supplied by defendant was that they were not strong enough. Mr. Bishop Harman also gave evidence.

For the defendant it was contended that he did not profess to be a person able to diagnose and cure diseases of the eye, but was simply a maker and seller of spectacles. The assistant who first saw the plaintiff said he had had eight years' experience in testing eyesight. He supplied her with spectacles for astigmatism. He had not made a study of diseases of the eye. Cases were referred to an oculist when the results of their own tests were unsatisfactory. In cross-examination, he said that if he had known or suspected that the case was one of conical cornea he would have sent her to an oculist; he had never seen a case of conical cornea, and had not attended any lectures on eye disease. The defendant, in examination, said he had been twenty-two years in business as an optician; he possessed the certificate of the British Optical Association. He had no training or experience in diagnosing or dealing with diseases of the eye. The only time he saw the plaintiff was in April, 1909, when she said that she wanted glasses to enable her to read better than those she then had, and he supplied them. In cross-examination he said that the billheads described him as an eyesight specialist; he was an ordinary optician and something more. He had the diploma of the British Optical Association, but that did not set out the qualifications of an eyesight specialist, nor had he any other document to show them. His letter paper also showed that he had consulting hours, but he had altered that to business hours; the alteration was not in consequence of this case. Beyond being able to detect an advanced cataract, he was entirely ignorant as to diseases of the eye or how to detect them. If a customer was satisfied with the glasses supplied he had done his duty as an eyesight specialist, and it was not for him to discover disease.

At the beginning of the second day's proceedings the Lord Chief Justice recalled Mr. Harman, and asked him whether there was any practical reason why, the trade of an optician being well known, the optician should not supply glasses if the eye responded to the tests described by the defendant.

Mr. Harman replied that an eye might pass the tests perfectly, and yet blindness or even grave brain disease might be impending; an optician should make it clear to his customer that he was only giving advice and supplying glasses to the best of his ability.

Mr. Sydney Stephenson, F.R.C.S., who was called for the defence, said that he had examined the plaintiff along with Mr. Wray in February, 1910, and found her suffering from conical cornea. From the history of the case he would say that when the plaintiff first went to the defendant in 1907 the disease would be in an incipient stage, and had existed for a few months. Conical cornea was rare, and he estimated it to occur once in ten thousand eye patients; in its incipient stage it was difficult to discover, and no optician would be likely to detect it. The glasses supplied by the defendant could not have increased the progress of the disease and no glasses would have retarded it. There was no evidence to show that reading made the disease worse, though he thought it might be unwise to allow reading. In cross-examination he said it was important to avoid strain in the condition in which the plaintiff's eyes were, and that to endeavour to read with glasses that were too weak would cause strain. In re-examination he said that to detect diseases of the eye required medical training.

Mr. Hartridge, F.R.C.S., said that the spectacles supplied by the defendant were suitable in view of the tests taken. In cross-examination he said that the duty of an optician must depend on what he held himself out as able to do in the particular case. In conical cornea it was important that the glasses should be of sufficient strength. In re-examination, he said there was no known treatment which would avail in conical cornea.

Further evidence was called, and counsel for the defendant and plaintiff addressed the jury.

The Lord Chief Justice, in summing up, said that the case was one of difficulty both of law and fact. The action was brought for a breach of duty by an optician who carries on a well-known form of business, and, if they thought he had been negligent as an optician, they must find for the plaintiff. The plaintiff admitted that she had not been influenced by the defendant's description of himself as an eyesight specialist, and she admitted that she knew an optician was not an oculist. Conical cornea was admittedly a very rare disease, and there was a conflict of evidence as to whether it could be easily discovered in its early stages. Could they say, in view of the fact that opticians carried on a well-known trade, that opticians were under any obligation to discover disease. Having reviewed the facts and pointed out certain inconsistencies in the plaintiff's story, he told the jury that to find in favour of the plaintiff they must be satisfied that the defendant had been negligent as an optician, or had taken on himself and had not performed duties outside those of an optician.

The jury returned a verdict for the plaintiff for £25. Judgement was entered accordingly with costs.

A Legal Correspondent writes:

This case can hardly be quoted as an authority for the proposition that a jury has declared that an optician professes the skill of, and must be held liable for negligence as, an ophthalmic surgeon. Due regard must be had to what each optician professes to be able to do. If a man goes into a shop and tells the optician behind the counter that he is short-sighted, and the optician, after testing the sight, prescribes certain glasses, it is difficult to see how he could be held responsible if the real source of trouble was disease which he did not profess to be able to detect. *A fortiori* he would be exposed to no risk if he told his customer that he knew of nothing of the diseases of the eye. His liability would be the same as that of the proprietors of the penny-in-the-slot eye-testing machine.

There is no reason for suggesting that this particular lady refrained from going to an ophthalmic surgeon because she disliked having to pay his consulting fee; but there can be no doubt that hundreds of people go direct to opticians for this reason. It appears to be impossible to convince a large section of the community that he who essays to practise medicine in any one of its various branches is entitled to the fee which he asks for the services rendered.

The fact that the ophthalmic surgeon, in order to become competent to practise that speciality, has spent many years of his life, not only in estimating refraction, but in studying diseases of the eye, is wholly overlooked. The failure of many people—even among the better educated classes—to distinguish between what for lack of a better analogy may be termed "mental and manual dexterity" in not confined to the medical profession. The solicitor's charge of 3s. 4d. for writing a letter is sometimes considered exorbitant; the barrister who demands a guinea for saying, "If your lordship pleases," or even for going to court and holding his tongue is sometimes declared to be a fraud. The person who jibs at these professional fees fails to remember that there is nothing to prevent him from acting as his own physician, or from conducting his own cause. If he is unwell he can buy drugs; but he does not know what to buy. If he is engaged in litigation, he can write his own letters; but he does not know what to write. If he is haled before the court, he can plead his own cause, but he does not know what to say; or, what is perhaps more important, he does not know when to be silent. In each case he is without knowledge and experience. It is for that knowledge and experience that he has to pay the professional man his fee.

SCIENCE NOTES.

An interesting account of some experimental observations on the mode of transmission of certain blood parasites of freshwater fishes was given at a recent meeting of the Royal Society by Miss Muriel Robertson, whose earlier work on the transmission of the trypanosome of the skate through the intermediary of a blood-sucking leech is well known; her present observations show that the life-cycle of the trypanosome parasites in such freshwater fishes as goldfish, perch, bream, pike, and rudd is completed by a similar intermediate host. In this case it is the small freshwater leech, *Hemiclepsis marginata*. By rearing these leeches in captivity it was ascertained that the trypanosomes were not transmitted from parent to offspring, and that the adult leeches became infected by sucking the blood of an infected fish. When the trypanosomes are sucked along with the blood into the crop they begin to multiply rapidly, and undergo a striking change of form. In a few days very slender forms make their appearance, and these increase in number until the blood in the crop is completely digested; shortly afterwards they migrate forward into the proboscis sheath. In this stage, which is apparently the infective stage, no further division takes place. The trypanosomes remain in the proboscis sheath until the leech feeds again, when they are inoculated into the fish. There is a curious anomaly in the fact that after an infected leech has fed on an uninfected fish the characteristic slender forms entirely disappear from the crop of the leech, and infection is carried on by means of short broad forms. One feed suffices to clear the proboscis sheath. These results form a valuable contribution to our knowledge of what is undoubtedly a somewhat complicated process.

The origin of the sympathetic nervous system has always been somewhat a mystery, and, according to the latest work of Kuntz,[1] several of our generally accepted ideas are not altogether correct. The sympathetic system, so far as is known, is peculiar to vertebrate animals, and it only reaches its fullest development in the highest vertebrates. It may thus be regarded as an indication of a high degree of specialization, and its first appearance looked for comparatively late in embryonic life. Kuntz has studied its origin in both mammals and birds. The main trunks arise as a pair of cell columns on the dorsal surface of the aorta. They are derived from cells which have migrated from the nerve cord into the dorsal and ventral roots. These make their way along the spinal nerves and their terminal branches to take up a position alongside the aorta. The prevertebral plexuses arise directly from the sympathetic trunks, and first appear as small cell masses lying on the ventral surface of the aorta. On the other hand, the cardiac plexus and the visual sympathetic plexuses are not, as has hitherto been believed, derived from the sympathetic trunks. They owe their origin to nerve cells which have migrated along the vagus nerves from the hind brain and vagus ganglia. To indicate this origin the author suggests the term "vagal sympathetic plexuses." These migrating cells do not all take part in the formation of the sympathetic system, for some go to form the neurilemma. At the same time, there seems reason to believe that the sympathetic system is largely augmented by cells which do not have a nervous origin. No sensory neurons are demonstrable in the sympathetic trunks or prevertebral plexuses, but from experimental evidence it appears likely that such do exist in the sympathetic plexuses of the alimentary canal. From his observations Kuntz comes to the conclusion that the sympathetic system is not a thing *sui generis*, but is an intrinsic part of the nervous system homologous with its other functional divisions. This conception may lend a new aspect to the problems connected with the functional relationships of the sympathetic system.

[1] *Journ. Comparative Neurol.*, xx. 212-258, and 283-308.

To commemorate the twenty-fifth year of Sir J. J. Thomson's tenure of the Cavendish professorship in Experimental Physics at Cambridge, an interesting volume, entitled *A History of the Cavendish Laboratory*,[1] has been published. It takes the place of the more familiar *Festschrift* of the German universities, and forms what is in many respects a more entertaining and valuable souvenir. It is almost twenty-six years now since Thomson commenced his duties as Cavendish professor, and during that period he has been one of the greatest living forces in modern physics, and has raised Cambridge to the pre-eminent position which it at present occupies in that science. Perhaps no post has been held by three men in succession of such commanding ability and varied genius as have occupied the Cavendish chair. Clerk-Maxwell was the first professor, and held the chair until his death in 1879. Lord Rayleigh was his successor, and filled the years till Thomson's appointment in 1884. The wide reputation of these three men alone would have conferred undying fame upon the laboratory, but they have the greater merit in having founded a thoroughly efficient school, which has attracted workers from all parts of the world, and which has provided professors and teachers for a very large number of universities, not only in this country, but also in America and overseas Britain. The extent and scope of the original work which has issued from the laboratory is evidenced by the large bibliography of published papers which finds a place in the commemoration volume, and which further shows the rate at which the number of competent workers has increased. This has been particularly noticeable during Professor Thomson's incumbency. Another interesting feature is a list of all those who have been engaged in original research in the laboratory since its foundation. The number is well over 200, and amongst the names we find those of men who are distinguished not only in the world of physics, but also in other walks of life. Amongst the latter may be mentioned Professor Chrystal, Sir G. H. Darwin, Sir Oliver Lodge, and Sir Donald MacAlister. The volume presents much that is of interest to the general reader, but the main interest is naturally for those who are in the happy position of being physicists. Several of the chapters, indeed, will be intelligible only to them. Each chapter is the work of a separate contributor, who deals with a short period. An attempt is made to give not only an account of the history of the laboratory during each period, but also of the work done and of the trend of thought leading up to that work and the many instructive sidelights associated therewith. The various contributors, each with his own light, have followed this plan with greater or less success, and have produced what must be regarded as an exceedingly harmonious whole. One of the most interesting chapters is a survey of the last twenty-five years by Professor Thomson himself. The history of the early difficulties in the teaching of experimental physics and of the events which led up to the founding of the Cavendish Laboratory through the generosity of the Duke of Devonshire also make interesting reading. The original building in course of time naturally became insufficient to meet the growing demands for accommodation, and various makeshifts had to be resorted to. This state of affairs, however, was eventually remedied, first by the generosity of Professor Thomson and later of Lord Rayleigh, who made over £5,000, the bulk of the proceeds of the Nobel Prize, towards providing adequate extensions. The new buildings were completed in 1908, and then only, the first time for many years, were the whole of the lectures on physics concentrated within the Cavendish Laboratory. The need for this was very great, for in intervening years two new university lectureships in physics had been created, and the number of lecture courses delivered annually had increased enormously. The value of the volume is enhanced by a series of plates, including portraits of Clerk-Maxwell, Rayleigh, and Thomson, and we offer our congratulations to those responsible for the form which the commemoration has taken.

[1] *History of the Cavendish Laboratory, 1871–1910.* London: Longmans, Green, and Co. 1910. (Med. 8vo, pp. 352. 7s. 6d.)

UNDER the will of the late Mr. John Howard Colls, late chairman of a firm of contractors, Camberwell Dispensary receives a bequest of £500, and the Evelina Hospital for Sick Children one of £200.

A BOARD OF GUARDIANS AND ITS MEDICAL OFFICER.

A DIFFICULTY has arisen between the medical practitioners resident at Thornton Heath and the Croydon Board of Guardians in connexion with the appointment of medical officer for the No. 2 District of the Croydon Union. The holder of this appointment (Dr. W. B. Addison) applied some time ago for an increase of salary, but his application was refused. The salary was fixed at £75 a year nineteen years ago; since then there has been an enormous increase in the population among the class from which parish patients are drawn, and a very large increase in the amount of work. In consequence the salary for some years has come to be, in proportion to the amount of work required, lower than in any other district of the Croydon Union. Dr. Addison consequently resigned, and at a recent meeting of the Croydon Board of Guardians the special out-relief subcommittee reported that applications had been invited for the appointment at a salary of £70 a year, which, it will be observed, is a reduction of £5 as compared with the salary previously given, but that none had been sent in. The committee further reported that it had received the following letter:

Thornton Heath,
March 1st, 1911.

Ladies and Gentlemen,

We beg to acknowledge the receipt of the forms of application for the post of Medical Officer for this district and thank you for the same. We note that the salary is to be £70 per annum. Since this remuneration per patient attended would be less than half that in any other district, and as very many more patients have to be seen in this district than in any other, and the distance covered would not be materially less, we are unanimously of opinion that in order to efficiently discharge the duties of this post, the salary should not be less than £120 per annum. Trusting that you will give this matter your consideration.

(Signed) E. P. CHENNELLS.
J. MURDOCK.
C. H. PASSMAN.
C. E. PEPPER.
C. S. RIPPON.

In the discussion which ensued Miss Musselwhite moved to refer the matter back for further consideration, observing that the district was the largest and poorest in the union; for many years the medical officer for it had been treated with conspicuous injustice, yet it was now proposed to reduce the salary still further.

Councillor Clarke, who seconded the motion, said that he sincerely hoped the guardians would have considerable difficulty in finding anybody to take up the post at the salary offered.

In reply to a question, the Clerk stated that the value of the additional fees was about £34 a year.

Mr. Moffat said it was not a credit to the union to ask a professional man to take 834 cases at a cost of 2s. 2½d. per case. If they added the £34 a year it was only 3s. 3½d. per case.

Mr. W. H. S. Aubray, LL.D (New York), said that the special fees had amounted to £44, and that he felt that the medical men were trying to terrorize the board of guardians.

Mr. Williams considered that the doctors were perfectly justified in making the representation, and it could not be considered in any way as terrorizing.

The amendment was then put, and there voted—for 13, against 13. The Chairman declined to give a casting vote, and the amendment fell through. Afterwards the report was adopted.

The position is therefore clear enough. A board of guardians pay an inadequate salary to the holder of an appointment who asks that the injustice may be remedied; this request is refused; he resigns; a subcommittee advises the guardians to seek a medical officer at a salary still further reduced; all the local members of the profession decline to apply and indicate the salary, certainly not a large one, which they consider would be reasonable. One-half of the members of the board present agree with the doctors, but, by the operation apparently of a standing order, the report is accepted and the office will be advertised. We imagine that no self-respecting medical man will respond to the advertisement.

THE second annual meeting of the Hampstead Public Medical Service will be held at 4.30 p.m. on Wednesday, March 29th, in the fencing studio of the Hampstead Conservatoire, Swiss Cottage. Dr. A. R. Roche (Secretary) informs us that any one interested in the public medical service movement is cordially invited to be present.

LITERARY NOTES.

MESSRS. PUTNAM will shortly publish a study of *Criminal Man according to the Classification of Lombroso*, by his daughter, Signora Ferrero. The work summarizes the leading characteristics of criminals, and presents a general outline of the ideas of the modern penal school originated by Lombroso.

Modern Theories of Criminality is the title of the somewhat similar work with which Mr. Heinemann will begin his "Modern Criminal Science" series, the object of which is to make accessible to English readers the leading Continental treatises on the subject. This volume is by C. Bernaldo de Quiros, of Madrid, translated by Dr. Alphonse de Salvio.

Messrs. Macmillan will shortly publish an English translation of Professor Luigi Luciani's *Human Physiology*, which is now in its third Italian edition, and has already been translated into French, German, and Russian. The work is being translated by Frances A. Welby and edited by Dr. M. Camis, of the University of Pisa, who is adding to each chapter a selected list of English monographs and papers on the subjects dealt with. The first of the four volumes will, it is announced, be ready immediately, with a preface by Professor J. N. Langley.

In reference to the epigrams on Sir Fielding Ould and Lord Glenbervie (formerly Sylvester Douglas) which appeared in the Literary Notes of March 4th, a correspondent furnishes us with the following additional obstetric ones from Ulster. Some time in the Seventies of the last century a well-known Dublin doctor and also an ex-Master of the Rotunda Hospital, Dr. Evory Kennedy, who first described the *funic souffle*, which he supposed was due to some interference with the circulation of the blood through the umbilical arteries—a hypothesis which subsequent investigations have confirmed—became a candidate for the representation of Derry, well known as the "Maiden City." Dr. John S. Drennan, son of Dr. William Drennan, the celebrated Irish politician and poet, in one of whose poems, "When Erin first rose from the dark swelling flood," the phrase so often quoted, "the Emerald Isle," first occurs, wrote the two following amusing epigrams:

No. 1.

An Accoucheur for Derry! Shame and pity!
What a reflection on the Maiden City!

No. 2.

Rejoice, old Walls! Ye Prentice Boys be merry!
Another *Great Deliverer* for Derry.

Either Dr. Kennedy or one of his friends replied as follows:

Remembering King William's fame,
A Deliverer surely has a claim.

Dr. J. S. Drennan's *Poems and Sonnets*, which, to quote from the preface, "reflect in some degree the broad and philosophic views, the cultured mind, and the keen sense of humour of one to whom the world of letters was more familiar and perhaps more congenial than the world of men," have been published in a charming volume by his children in loving remembrance. Here are two short pieces which illustrate his delightful humour:

To the Girls.

Dear girls, in your pursuit of knowledge
Two things observe—you need no other;
Matriculate in Cupid's college,
And get diplomas from his mother.

These lines were written when it was first announced that Queen's College, Belfast, would be open to women.

Medical Recipe.

By a patient too fair sat a doctor too young,
With eyes more intent on her lips than her tongue;
He tested her heart, as its pulse's recorder,
But, alas! in his own was the fatal disorder;
And soon from the region in which it was bred,
This sad "*tremor cordis*" so muddled his head,
That instead of some physic to mend her condition,
He urged as a recipe, Take your physician.

The Selborne Society, of which the president is Lord Avebury, has enlarged its magazine and printed it on art paper. For many years it was called *Nature Notes*, but two years ago the old name of *The Selborne Magazine* was once more adopted. In the February number Miss Hodgson, who has so successfully introduced nature study into the Croft School and the Croft School Circle, gives some hints on the teaching of natural history in connexion with geography and archaeology. There are many interesting natural history notes, and the number is thoroughly well illustrated. A children's corner has been started, and in it the editor continues his article on "Brasses and how to rub them." All particulars with regard to the magazine and the society can be obtained from the Honorary Secretary, 42, Bloomsbury Square, London, W.C.

The question of compulsory school athletics is one upon which, as is well known, there is every possible divergence of opinion, and the different points of view held by the opposite camps are clearly illustrated by a collection of short articles on "Athletics and School Life," which have been contributed to the March number of *The Child* by a number of experienced school doctors and others concerned with the mental and physical training of the rising generation. Quite apart from the excellence of their subject matter, these articles are extremely interesting for another reason, for they represent every side of the case, and contain arguments both for and against the adoption of compulsory school games, ranging from Mr. Oscar Browning's denunciation of "the present condition of athletic worship in our public schools as nothing short of a national calamity," to the emphatic protest of Dr. Clarence W. Haig-Brown, who declares that "athletic sports are an essential means by which the man is educed from the boy." The opinion of the majority of writers, however, appears to be that up to a certain point physical exercise is not only excellent but necessary, both for the minds and bodies of growing children of either sex, but is unquestionably dangerous when indulged in to excess; and Dr. Robert Jones even goes so far as to regard the modern craze for athletics as a possible cause of the "increase in the numbers of cases of primary insanity in young people of both sexes." It is one thing, however, to diagnose the disease, and quite another to prescribe the remedy. Dr. David Forsyth truly remarks that "the problem of athletics and school life cannot be solved by general principles. It is a question of the individual child"; but a suggestion made by Dr. Clive Riviere would seem to meet the difficulties of the case. Though a firm believer in the system of compulsory school games, Dr. Riviere admits that the adoption of such a system places an immense responsibility upon the school that enforces it, and for that reason he considers that "it is of the utmost importance that such games and their players be under medical supervision." If this suggestion were carried out, there can be little doubt that a great deal of unnecessary suffering might be avoided for nervous or delicate children, in after-life as well as during their school career. Besides the series of articles just mentioned, the March number of *The Child* contains, as usual, a large variety of interesting matter on other subjects. The beneficial effects of "The Medical Supervision of Children in Orphanages and similar Institutions" are well described in an article by Dr. Robert Milne; Robert J. Parr has contributed a moving account of the work done by the National Society for the Prevention of Cruelty to Children; an interesting sketch of life at the large co-educational public school of St. George's, at Harpenden, is given by Miss Emma Gurney Salter; whilst Dr. John J. Buchan's article on "The Declining Birth-rate" contains a much-needed warning to those who should have the welfare of their country at heart.

Spanish students of medicine seem to take very seriously the venerable jests against their profession that have tickled the ears of the groundlings from time immemorial. In a comedy recently played at Madrid one of the characters was made to say of medical students, "Those small boys cut up the dead bodies of the poor that they may learn how to cure the diseases of the rich." The remark is stupid in itself, for, as Macaulay pointed out in the debate that led to the passage of the Anatomy Act, the poor benefit more than the rich by the study of anatomy. The rich man can always get the best skill, while if anatomical and, it may be added, physiological work is hindered, it is the poor who must suffer from the want of knowledge on the part of their advisers. In this country we can hear ourselves called "Sawbones" and equally complimentary names with indifference. The Madrid students, however, hissed the author, threw all available missiles on the stage, and destroyed the furniture of the theatre. Many people were injured, and the police had to be called in to quell the riot. We do not defend such conduct, but when will authors learn that cheap sneers at the medical profession are in bad taste and out of date?

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EUGENICS AND UNEMPLOYMENT.

THE problem of unemployment is but one of the many social problems with which we, in common with most other civilized countries, are being brought face to face. These problems are by no means new, but they are becoming year by year more pressing, and will continue to do so until a really serious effort is made to deal with these questions in a broad scientific spirit. Much strenuous and well-intentioned effort has been directed for some years past to the mitigation of the evils attendant upon unemployment, to the solution of the economic problems to which it has been ascribed, and to its prevention, or at least its diminution, in the future. The results of all this effort have been disappointing. Charitable organizations and individual effort have done something to mitigate the sufferings consequent upon unemployment, but the problem itself has hardly been touched. The establishment of labour bureaux by the Legislature may help to diminish the evil to a certain limited extent, but that it will do more is very doubtful. Little serious attempt has been made to consider social problems as a whole from a biological standpoint. It would almost appear as if it were generally assumed that the laws of natural selection, of inheritance and other natural laws altogether cease to be operative when we come to deal with problems affecting the human race. Unemployment is but one aspect of the complex problems of the social organism, and ought not to be considered by itself.

A very interesting lecture on eugenics and unemployment was delivered last year in Trinity College, Cambridge, by Mr. W. C. D. Whetham, who with his wife was joint author of that admirable book, *The Family and the Nation*. Mr. Whetham is an ardent believer in Mendelian inheritance, and to heredity he attaches the utmost importance even in connexion with unemployment. Mr. Whetham perhaps is inclined to place rather too much stress upon inheritance to the exclusion of environmental effect, just as the practical reformer in the past has directed his attention too exclusively to environment to the exclusion of any considerations of the effects of inheritance and of the rate of multiplication in the lower strata of society. There are some hopeful signs that the rational biological method of attacking the problem is coming to be recognized in quarters where one might not have expected it. At the recent Church Congress held in Cambridge a whole morning was devoted to a discussion on the care of the feeble-minded. The meeting was crowded. An extremely able paper was read by Mrs. Pinsent, who dealt with the inheritance of certain classes of disease, of feeble-mindedness, and of criminality, in a way that would hardly have been attempted before such an audience a very few years ago. Segregation was urged as a partial, if not a complete, remedy. The outburst of applause which marked the conclusion of Mrs. Pinsent's paper was as unexpected as it was significant of the change that is gradually coming over public opinion.

Mr. Whetham and others have drawn attention to the disproportionate rate of increase among the population of unemployables, compared with that of the desirables. The facts and figures quoted by them are striking, not to say alarming. Some of the facts which have to be faced are these: First, owing to the struggle for existence the number of children in families which are of most benefit to the country is steadily and rapidly diminishing. The causes of this diminution, whether voluntary or not, we cannot enter into on the present occasion. Secondly, the number of children born to parents of the undesirable classes is steadily and rapidly increasing. These two facts taken conjointly must have the effect of lowering the mean "desirability" of the nation as a whole. Efforts directed entirely, as has hitherto been the case, to improving the environmental conditions of the latter class, tend, it is argued, to accentuate the evil by affording opportunity and encouragement for a still further increase in the birth-rate.

The remedy would appear to lie in the direction of (1) encouragement to the "fit" to have larger families, and (2) prevention of the "unfit" from propagating their kind, at any rate in disproportionate numbers. A start has been made in the first-named direction by the allowance on income tax for each child under a certain age. This innovation in the Budget of last year, though on a very small scale, is certainly a step on the right road, and it may be hoped that the Chancellor of the Exchequer may see his way to increase the amount allowed, and thus encourage the desirable class of persons with small incomes to raise larger families.

It is when we come to deal with the question of prevention among the unfit that the main difficulties have to be faced. Two possible methods have been suggested, segregation and asexualization. Of these the former will undoubtedly meet with least opposition. It is apparently a comparatively simple expedient and does not offend sentiment, but there are matters connected with it which have to be considered. To compel celibacy in a class of people in which the sexual passions are strong or may be perverted, as is not nfrequently the case among those very people which it is desirable to segregate, is a doubtfully humane method of treatment. The tendency to immoral and vicious practices may possibly become a serious matter. There are, in fact, serious objections to the principle of segregation, to say nothing of the enormous present expense to the community, though the ultimate benefit is unquestionable.

The objections to the policy of asexualization would in this country undoubtedly be very strong. The fact, nevertheless, remains that we are face to face with a very serious condition of affairs; a complacent public prefers not to think about such unsavoury subjects, but the public conscience must be aroused. The present position is due to the fact that by interference with the law of natural selection —which, be it remembered, is operative in man as in other organisms, plant and animal—there have been brought about quite unnatural social conditions. Efforts to ameliorate environmental conditions are very necessary, but the important factor of heredity must be fully considered, and Mr. Whetham is quite justified in calling public attention to this factor in the problem. It is earnestly to be hoped that any future schemes which may be under-

taken to deal with the problem of unemployment, whether by the Government or by local authorities, will be considered in a really broad spirit, and that upon all advisory boards medical men and biologists who have studied these problems will be adequately represented. Social problems must be dealt with scientifically and by men of scientific training, for they are essentially biological problems.

THE PUTNEY HOSPITAL.

AT the Annual Representative Meeting, 1909, two resolutions dealing with the inception and management of new public medical institutions were adopted, and are likely to exercise great influence on the future development of the hospital system. The first was that no fresh public medical institution should be started without previous consultation with the local medical profession; the other affirmed the desirability of the co-operation of officially recognized representatives of the local medical profession in the promotion and general management of hospitals and other medical charities, and urged that for the appointment of such representatives use should be made of the machinery afforded by the Divisions of the British Medical Association. These decisions need no defence. Without the co-operation of the medical profession such institutions could not exist, and the lines on which they should be managed with least danger of abuse is clearly a matter on which the profession is able to give expert advice. The most effective and appropriate way in which the rights of the local profession can be recognized, and advantage taken of its advice, is by inviting it to appoint representatives on the governing board of the institution. If the desirability of consulting the profession at the inception of institutions of this kind and the necessity for subsequent medical representation be granted, there can be no doubt that the only organization which can in most localities claim to speak for the profession in any representative and continuous way is the Division of the British Medical Association.

This preamble may fittingly introduce a few remarks on the history of a pioneer effort to secure the recognition of these principles. In 1900 the late Mr. Henry Chester of Putney left about £80,000 to sustain a hospital at Putney. The money was not to be used in building the hospital, but simply in maintaining one when built, and the only conditions imposed were that the hospital must be a general hospital; that it must be in the parish of Putney; and that its site must be approved by the Haberdashers' Company, the trustees under the will. On the initiative of Dr. E. F. White of Putney, who was approached by the trustees, the local profession were consulted as to its attitude towards the proposed hospital, and agreed to support it. As a consequence of a public meeting called later, a building committee was formed, and two well-known local practitioners were elected on it. In 1906, the attention of the Wandsworth Division (in whose area Putney is situated) having been directed to the possibilities of the institution of a new hospital in the district, that Division, in conjunction with the Richmond and Chelsea Divisions, which were closely concerned in the matter, established what was known as the South-West London Medical Hospital Committee. The Chairman was Dr. Gilbert Richardson of Putney, and Dr. E. R. Fothergill of Wandsworth acted as Honorary Secretary. This committee approached the Building Committee, and with the assistance of the two medical members of the latter succeeded in obtaining the acceptance of the following principles: (1) That there was no necessity in that neighbourhood for a large general hospital, and that one of 20 beds would suffice for the needs of the district; (2) that an out-patient department was unnecessary; and (3) that the number of non-paying beds should not be greater than the needs of the district or the resources of the endowment. The South-West London Committee then endeavoured to secure the support of the local profession for a scheme for the management of the hospital, which included such valuable provisions as that a certificate of a local medical practitioner should be a sufficient and necessary recommendation for admission; that every local practitioner should have the opportunity of attending his own patients in pay beds; that the staff should be divided into two parts—a consultant staff, the members of which should practise exclusively as physicians, surgeons, and gynaecologists respectively, and an attending staff of four local practitioners, who should be appointed on a system of rotation and retire after four years' service; that the hospital should be governed by a council, one-third of which should be composed of persons elected by the Chester trustees, one-third of persons elected by the original donors, and one-third of medical practitioners representative of the local profession, the latter to be appointed in accordance with conditions laid down in the rules of the Wandsworth Division; and that there should be a medical committee formed of all the medical members of the council, together with all the attending staff. Protracted negotiations, a report on which has just been presented to the Divisions represented on the South-West London Committee, took place between that committee and the Putney Hospital Committee elected by the Putney doctors. The net result is that the latter, while favouring the greater part of the scheme, prefer a staff on ordinary hospital lines to one founded on a rota of local practitioners, and instead of accepting the suggestion that the representatives of the profession on the Hospital Council should be elected in accordance with conditions laid down by the rules of the Wandsworth Division prefer to keep the election of these representatives entirely in the hands of the profession in Putney. They have, however, agreed that the member of the profession who for the time being represents Putney on the Executive Committee of the Wandsworth Division shall have a seat on the local committee, thus to some extent keeping that body in touch with the hospital in the future. The report of the South-West London Committee points out the improbability of the operations of the new hospital being permanently confined to Putney, and urges that the executive of the Wandsworth Division should be authorized to act, if and when necessary, in safeguarding the interests of the profession surrounding the Putney postal area.

If it has not been found possible to secure unanimity in the local profession as to the best method of organization of the Putney Hospital, certain points of great professional interest have emerged. The action taken has secured that the local profession has been consulted in the inception of the hospital, and is certain of recognition in the further stages of its organization. If the local profession had done nothing more than prevent the founding of an out-patient department in a district in which such a department

is not needed, it would have amply justified its great expenditure of time and trouble. But, in addition to that, and in addition to securing the adoption of other important principles in connexion with the local hospital, the Divisions concerned have been largely instrumental in securing the adoption by the British Medical Association of the general principle of the right of the local profession to be consulted when schemes for the institution of new medical charities are being discussed, and of their representation as a profession on the governing boards of such institutions.

ANNUAL EXHIBITION, BIRMINGHAM.

In connexion with the seventy-ninth Annual Meeting of the British Medical Association in Birmingham from July 25th to July 28th, the usual exhibition of (*a*) medical and surgical instruments; (*b*) drugs, foods etc.; (*c*) sanitary and ambulance appliances and all articles of special interest to the medical profession, will be held. In addition it is hoped to arrange a special section devoted to motor cars, motor cycles and accessories and carriages. The exhibition will be held in the Bingley Hall, a building which affords ample space and is situated within a few minutes' walk of the buildings in which the reception room will be established and the sectional meetings held. Section (*a*) of the exhibition will include displays of books, charts, etc. The applications already received make it certain that the exhibition will be on a large scale and have a representative character.

LIFE ASSURANCE FOR RESIDENTS IN THE TROPICS.

Now that more and more young people are yearly seeking an outlet in the tropical and subtropical regions of the Empire, the question of insurance risks becomes increasingly important. It has been the custom of British offices for many years to add a considerable "load" to any such life accepted by them if the insurer lived permanently abroad or was liable, in the course of his business, to be called frequently out of England. Such a "load" may have been justifiable fifty years ago, when sanitation was bad, the laws of health imperfectly understood, and access to and from England much slower than it is now. But in these days of rapid locomotion, prophylactic treatment, and vastly increased knowledge of tropical medicine, it is held by many that the present premiums are much too heavy for the risks undertaken. That there may be considerable justification for this belief seems indicated by the fact that some American companies do not thus handicap their policy holders, and a large business is therefore done by them amongst residents abroad, especially in China, who have been deterred by the excessive rates charged by the British offices. From an article by Mr. James Cantlie,[1] it appears that the tabooed countries include all those lying between 33 deg. N. to 30 deg. S., irrespective apparently of the fact that these latitudes include health resorts like the Canaries, Egypt, and some of the West Indies, equally with the West Coast of Africa, Mauritius, and the Amazons. This is like putting a premium on a man in Edinburgh because typhus fever is endemic in county Mayo. The absurdity is carried so far that a man, ordered abroad for his health, has to pay an extra premium while he is abroad because he has left the place where he is likely to die for one in which he has a chance of recovery. Another fact brought out is that insurers of all ages are equally penalized. This, again, it is stated, is quite unjustifiable, a youth of 18 being much more liable to disease than a man of 30, the incidence of disease being between 18 and 25 two to one, between 18 and 30 ten to one. The more mature a man is when he goes to the tropics the less likely he is to suffer from the effects of climate; the longer he has been in the tropics the less likely he is to succumb to any of the special tropical risks. This the insurance companies ignore, acting on the principle of "lumping" the risk—what they lose on the younger man they gain on the older. The fact is that as there are no reliable statistics to go upon, the companies overcharge indiscriminately to protect themselves. Mr. Cantlie suggests that after seven years in a "proscribed" country the extra premium should be reduced one-half if examination by the company's medical officer shows that no permanent ill effects have been produced by the residence abroad. After ten years it might similarly be reduced to one-third, and in the fourteenth year be the same as that ruling in England. It is unfortunate that for insurance purposes the younger lives should be the greater risk, for a youth of 18 to 21 is much less likely to be able to afford the extra premium than one of 30, a man of 30 to 35 going to the tropics being usually in receipt of a much larger salary. To meet this, Mr. Cantlie suggests as an alternative that if a man, say in some shipping office, is insured for £1,000, and his firm in course of time sends him out to the tropics, instead of increasing his premium, it might be arranged that the risk should be reduced, say to £750 or £500, according to the unhealthiness of the climate. After the first five or seven years the risk could again be increased according to the medical report.

[1] *Journal of Tropical Medicine and Hygiene*, February 1st.

SCHOOL LIGHTING.

Two recent meetings of the Illuminating Engineering Society have been occupied with a discussion of school and college lighting. So far as the elementary day schools are concerned, the thing of chief importance is to ensure a plentiful and properly directed supply of daylight, but the increase of evening classes has made artificial illumination in schools a serious problem. Dr. James Kerr, dealing with the daylight question, arrived at the following conclusions: (1) That the window-lighting on the side of the class-room on the scholars' left should be as ample as possible, and equal at least to one-fifth of the floor area; (2) that window-lighting facing the children or coming from behind them, so that (in the latter case) they sit in their own shadows, ought no longer to be permitted; (3) that the rapid diminution of light with the distance from the window, which the photometer proves to be appreciable within the length of an office writing table, makes it inadvisable to have class-rooms of greater width than 20 ft. He added that many rooms were capable of great improvement by a judicious wall-covering. Above a height of 5 ft. from the floor the colour should be very light, and the beams and rafters should also have a coating of white paint. In the subsequent discussion an architect, Mr. Percy Waldram, expressed the view that it was vitally important to have high-angle illumination, and urged that the authorities should be prepared to sacrifice a great deal in order to have top lights in class rooms. Mr. Bishop Harman, oculist to the London Education Committee, said that the minimum artificial illumination on the school desk of a child had been estimated at 10 metre-candles, an amount not large when compared with ordinary daylight in a fairly lighted room. An ideal distribution of gas pendants or electric lamps for a class-room would be

to hang the first lamp—a 16-candle power lamp with 90 degree shade—slightly in front of the dual desk at the extreme left of the first row, and to make the others follow it from that point across the width of the room at distances of not less than 6 nor more than 9 feet. This line of lamps should light the first and second row of desks, a second line being hung in the same relation for the third and fourth rows. Indirect illumination by reflection, although useful in shops, show rooms, and museums, was inadvisable for continuous and detailed work at the desk. Dr. W. J. M. Ettles emphasized the bearing of wrongly directed lighting—more particularly lighting from behind, but also from the right side—upon posture, and, consequently, its ill effect upon the growing spine. The good results of scientific lighting in schools, however, were largely nullified by wretched lighting at home, and he advocated the abolition of home lessons. Two reports were presented, one, by Mr. Leon Gaster, giving the results of tests of the actual conditions of illumination prevailing in various London elementary schools, and the other, by Mr. J. S. Dow, dealing similarly with colleges and technical institutions. The voluminous data collected by these two investigators related mainly to artificial illumination, especially upon desks and blackboards. On the desks in the class-rooms of four typical elementary schools in London the illumination in foot-candles was found to vary from 1.6 to 5.0, the average being about 2 or 3 foot-candles. Two seemed to be sufficient for ordinary class work. Complaints arose when more delicate tasks, such as shorthand, sewing, or the reading of music, came into consideration. For such labour Mr. Gaster recommended 5 to 10 foot-candles. Blackboard illumination was the least satisfactory feature in the cases taken, varying within wide limits and having apparently no scientific basis at all. Comparative figures for German schools showed a relatively high illumination—never less than 4 foot-candles in the cases given, and sometimes as much as 8—though the consumption per square foot of floor area was not noticeably different from that usually met with in this country. It was claimed for the high-pressure indirect gas lighting used in Munich that the actual brilliant source of light was well screened from the eye, and that the possibility of shadows being cast by the writing hand was reduced to a minimum. In dealing with colleges and technical institutions Mr. Dow said that the lighting of the lecture theatre in many cases was of the rule-of-thumb order. It was the exception for special provision to be made for lighting the blackboard and diagram sheet, and the illumination on the desks—a less important matter in lecture theatres than in schools—often exceeded that on the lecture table. A requirement generally felt was some form of fixture which would evenly distribute the local illumination of demonstration table and blackboard and at the same time screen the eyes of the audience. Both Mr. Gaster and Mr. Dow emphasized the need for effective shading; no unscreened source should be allowed near the direct line of sight.

GASTRIC SURGERY AND PHYSIOLOGY.

ADVANCES in science are not always followed immediately by corresponding progress in practice, partly owing to the conservatism of the practitioner of every art, and partly because it is not always at once apparent that the advance offers a sound foundation for new departures. Progress in the art of surgery is often due to the marvellous intuition which inspires the born surgeon, although the work of Lister stands out prominently as an eminent example of the other method. The introduction of gastro-enterostomy can hardly claim to have been based upon definite scientific principles, but it is interesting to see that a somewhat belated science can furnish explanations of its success. In a recent address to the New South Wales Branch of the British Medical Association[1] Mr. John Flynn has taken for his text the bearing of recent advances in the physiology of the digestive glands on gastric surgery, and attributes the good effect of gastro-enterostomy in ulcer of the stomach to the breaking of the vicious circle which exists so long as spasm of the pylorus induces excessive secretion of gastric juice and increased acidity keeps the pylorus closed. The new outlet not only permits the timely exit of the stomach contents before they have become excessively acid, but also allows acid chyme to enter the duodenum, where by the formation of secretin it stimulates the flow of biliary and pancreatic juices, thereby relaxing the pyloric spasm through the duodenal reflex. He suggests incidentally that the diminished hydrochloric acid secretion observed in cancer of the stomach is due less to atrophy of the peptic glands than to diminished formation of gastric secretin when cancer involves the pyloric portion of the stomach. Recent observations on the variations in intragastric pressure justify the selection of the fundus for the seat of the opening when, as in ulcer, it is desirable to facilitate the regurgitation of the alkaline secretions of the liver and pancreas, while an opening nearer the pylorus is more appropriate if simple drainage is aimed at, as in cases of cicatricial pyloric obstruction. As the results of the operation are most certain where there is a permanent pyloric impediment, he believes it may be useful to cause such an impediment artificially by blocking the pylorus where it is wished to compel the contents to follow the new route. Bolton's experiments have shown that healing of a gastric ulcer is retarded when there is motor insufficiency of the stomach—a fact which affords a further explanation of the beneficial result of gastro-enterostomy in gastric ulcer. Finally, Mr. Flynn recalls the results of recent experiments, which have shown that the digestion of milk is impaired after gastro-enterostomy, probably owing to the inhibition of the secretion of rennin, consequent on the regurgitation of alkaline fluids. This he holds should teach us that a diet of pure milk ought to be abandoned as quickly as possible after the operation, while a liberal allowance of fats, which stimulate the secretion of the liver and pancreas, should be regarded as an essential element of the after-treatment.

THE PSYCHOLOGY OF HUMOUR.

WE not infrequently read in the report of a case of perhaps capital importance the words, "Laughter, which was instantly suppressed." The occasion of this merriment may have been a matter quite trivial in itself—as, for instance, some harmless witticism on the part of the presiding judge, the bovine stupidity of some rustic witness, or, as in the case which occurs to us, the sudden appearance of a black cat at the learned judge's elbow. The physiological interpretation of this sudden outburst of laughter offered by Herbert Spencer was that the pent-up nervous energy of those in court, but for the introduction of this humorous interlude, would have been employed in the production of an equivalent amount of new thoughts or ideas. The sudden interruption, causing a cessation of the mental strain, results in the discharge of this nervous energy and its diversion into the channel of an irregular motor energy. Unguided by purpose,

[1] *Australasian Medical Gazette*, December 20th, 1910.

this results in the stimulation of those muscles most habitually stimulated by feeling and emotion, and as the feeling becomes intensified an increasing number of muscles become affected, until sometimes the whole body is thrown into a convulsive motor activity. This muscular convulsion is of ancient origin, and has always been the physiological result of the humorous as appealing to eye or ear. It is interesting, therefore, to the biologist as well as to the psychologist. But when we come to the psychological aspect of the matter, interesting and fascinating as the study is, it evades accurate analysis. Be the physiological interpretation of laughter what it may, the exciting cause in all cases is that quality which is called humour. The quality of the joke emanating from the learned judge may have been sufficient in any circumstances to stimulate the sense of the ludicrous in those who had the privilege of hearing it—we would not wish to deny such a possibility. On the other hand, defining humour, in the words of Lowell, as being "in its first analysis a perception of the incongruous," the momentary alliance of the laughter-loving god with the majesty of the law may of itself have sufficed. There is, however, another influence which may explain the sense of humour so commonly shown in these circumstances. A sense of humour being generally reckoned one of the cardinal virtues, we are ever ready to give ourselves ample credit for its possession. We instinctively shrink from the imputation of having no sense of humour, but our eagerness to seem possessed of it cannot arise from the fact that it indicates any especial standard of intellect, for although the humour of Cervantes is as little likely to perish as the fiery imagination of Dante, it is quite possible to be a philosopher without being a humorist, though no doubt every true humorist is also something of a philosopher. At the same time we do not seem to have heard that any of the great band of philosophers from Aristotle downwards have been specially distinguished by a sense of humour, and cannot imagine Hegel or Kant positively rocking in their chairs at the most side-splitting judicial impromptu. Briefly, then, humour consists in the display of incongruity between two otherwise associable objects of thought, as distinguished from wit, which has been defined as consisting in the revelation of an unsuspected similarity between two otherwise dissimilar objects of thought. Now the hall-mark of true humour is its humanity, and if not of itself a moral quality, it is bound up with certain moral virtues of primary importance. The humorist may make mankind his laughing-stock, but never holds it up to scorn, and he as often as not laughs through his tears. It is a truism, indeed, that the greatest humorists have themselves been the victims of the most profound melancholy, and it is precisely because such men as Charles Lamb, Dickens, and Thackeray were conscious of the low sad music of humanity that their humour has become for us an abiding possession. But this is, perhaps, only for the few, and a certain cynical funniness divorced from pity and sympathy, esentially antipathetic rather than sympathetic, too often does duty for it. We may quite well suppose, as a writer in the *Fortnightly Review* suggests, that it was vastly humorous in the eyes of paleolithic man to see one of his fellows cut himself accidentally with a flint knife; in the same way, to take an everyday instance, it appears very entertaining to the majority of observers to see a man pursuing his hat on a windy day. Indeed, now, as then, anything which gives man a chance and fleeting superiority over the infirmities of his fellows, satisfies a sense of humour of this kind. This type of humour is in essence cruel, and may, and does, quite often become actively brutal. Physical deformities were ever a good joke among the Romans, as well as in Greece, and the stage sometimes gives us cause to ask whether even now we can boast ourselves altogether free from this reproach. Humour, save for the few, has not yet purged itself of a sense of joy in our neighbours' ills. If this be so, the possession of a sense of humour of the popular kind appears to be rather a questionable virtue after all, and while it may be true that women as a sex are lacking in humour, the fact that they are temperamentally and consciously averse from cruelty, may quite well account for this. Everything goes to show, in fact, that the average man has as much sense of humour as the Irish bishop who averred that there were some things in *Gulliver's Travels* that he really could not believe. So that on the whole we may quite fairly deduce from such incidents as those quoted above, that much that goes for humour nowadays, far from indicating any especial virtue in its possessors, can best be summed up in the words o Pope: "Gentle dullness ever loved a joke."

ISLE OF WIGHT COUNTY MEDICAL OFFICER OF HEALTH.

IT is with sincere regret that we have to report that our prediction made in the JOURNAL dated February 11th, that in relation to the proposed appointment of a medical officer to succeed Dr. Gibson there would be "absolute unity" in the profession has not been fulfilled. We then suggested that the right course for the Isle of Wight Council to adopt would be to withdraw the advertisement, and to offer to Dr. Gibson a salary commensurate with the position. We now learn that the appointment of county medical officer has been applied for, and that at a meeting of the council held last week Dr. Barford was appointed. From the report of the meeting in the *Isle of Wight County Express* it appears that twelve applications for the post were received, but that nine of the applicants withdrew their applications; it was stated that two other applications had been received after the appointed time. The three candidates remaining for the consideration of the council were Dr. Arthur M. Barford of Chichester, Dr. C. D Outred of Gravesend, and Dr. John A. Rose of Oakingates, Salop. Dr. Barford's qualifications for the post were stated to be that he was M.R.C.S Eng., L.R C.P.Lond., and M D.Brussels (with honours), D.P.H Edin.; that he held the appointments of Surgeon to the Portsmouth and South Hants Eye and Ear Infirmary (five years); Assistant Surgeon to, and Surgeon, Throat, Nose, and Ear Department, West Sussex and East Hants General Infirmary; Medical Officer, Board of Education and Chichester Post Office; Lecturer upon Hygiene to City of Chichester and West Sussex County Council Joint Education Committee. It was further stated that he had had experience in Public Health administration under the Medical Officers of Health for Reading, Hackney, and Stoke Newington. The qualifications of the other candidates we need not specify. At the meeting, it is somewhat satisfactory to note, considerable discussion arose, and some members expressed themselves strongly as to the remuneration which was offered. In the end, however, the election went through, and Dr. Barford was appointed to the office by a majority of twenty votes; there were five blank papers. Whilst not criticizing in any way the qualifications of the medical practitioner who has been appointed, we must express our opinion that Dr. Barford has not exercised a wise discretion in coming forward as a candidate. To hold a position as medical officer of health for a county

contrary to the expressed desire and approval of the local members of the profession, and in addition without the approbation of the leading medical association of the country, cannot lead to other than trouble and friction. Whilst acknowledging the medical officer as an authority in matters of public health, the cordial relations which should exist between such an official and the profession cannot, we fear, be established in the island under the present conditions; and the council, by riding roughshod over medical practitioners generally, as it has undoubtedly done, will have sown discord which cannot be reaped otherwise than disastrously by the community. To lower the dignity of the position of medical officer by offering a salary which is not commensurate with the important duties involved is a policy which can only reflect upon its originators. That a medical practitioner with the qualifications and experience of Dr. Barford should have by his action rendered it possible for the council to treat Dr. Gibson in the way it has is most regrettable, and, in our opinion, most mistaken. We did not ask for professional unity from selfish motives; we considered that by advising the profession to hold aloof from the appointment we were acting for the good of the community in respect of public health matters, in that an appointment of this nature should be not only one of honour and distinction, but so remunerated as to draw the best qualified and most highly trained into the list of candidates. What is the position in this instance? The candidates for the medical officership of health of a county numbered three, whereas the applications for similar appointments in other places are far more numerous. Can it be said that this redounds to the credit of the county or of the county council? Dr. Barford cannot be congratulated upon having accepted a position in the teeth of the opposition of his medical brethren. With Dr. Gibson our sympathy is great; but sympathy alone cannot compensate him for the position in which he is placed. Ousted from his appointment, prevented from practising in the island through no fault of his own, he deserves the support and help of the profession. The principle adopted by the council was, as one of the councillors stated at the meeting, a bad one, and the able and efficient services of Dr. Gibson should have been retained in the best interests of the Isle of Wight. The description given by one member of the conduct of the council as "mean, scurvy, and dirty" was ruled out of order by the chairman and withdrawn, but it is a sad commentary upon medical ethics that some medical men should have been ready and willing to fall in with the wishes of the majority of the council.

MEDICAL EDUCATION IN ONTARIO.

JUDGING from sundry private communications and the contents of Canadian medical journals, more especially the *Canadian Practitioner*, questions of medical education and professional control in Ontario are receiving at the present time somewhat more than their wonted meed of attention. Just as in this country, considerable differences of opinion exist as to the right curriculum to impose on medical students and the precise amount of time which should be allotted to each subject. Though the official length of the curriculum was not long ago raised to five years, this period is found too short fully to meet all the demands made, and some experienced authorities believe that the real essentials of medicine and surgery are being sacrificed to its finer studies. So far, therefore, the position is in many respects on all fours with that in this country. In respect of the control of the medical profession the reverse would seem to obtain. The medical profession in Ontario achieved a good many years ago, both in respect of admission to its ranks and the composition of its controlling body, a position which many would like to see reached in Great Britain. Its Medical Council is much less representative of schools and of degree and diploma granting bodies than is the General Medical Council of this country, and that council, by imposing its own examinations on applicants for registration, has established what is to all intents and purposes a one-portal system. A movement would, however, seem to be on foot to upset the present position of matters and to obtain for certain approved bodies, primarily the University of Toronto, entire freedom from the jurisdiction of the Medical Council. The desire is that the university in question shall not be subjected to the rules of the council in respect of the education of the students of its medical faculty, and shall be accorded by the legislature the right to demand from the council the registration as a medical practitioner of any person to whom the university has accorded its degrees in medicine and surgery. The motive of this endeavour would appear to be less dissatisfaction with the requirements of the council than a feeling that now that the medical faculty of the university has been so thoroughly developed it should no longer be subjected to the control of an outside authority. So far this movement has not gone very far, the predominant opinion seeming to be that if the provincial legislature were persuaded to fall in with the idea there would, in the end, be a complete reversion to the original state of affairs, some twenty or thirty years ago, when eclectic institutions of every kind had the right in Ontario to claim for their students full recognition as legally qualified medical men.

SALVARSAN OR "606."

THE correct constitutional chemical name of the organic arsenic compound introduced by Ehrlich, Bertheim, and Hata for the treatment of syphilis being dioxy-diamino-arsenobenzol-di-hydrochloride, it is not wonderful that the investigators who had to talk about it sought a shorter term, but we venture to think that the use of "606" should now be given up. It was at best nothing more than a convenient piece of laboratory slang, which has served its purpose and may now be abandoned. The full chemical term is doubtless too cumbrous for every-day use, and the chemical manufacturers have, we understand, definitely chosen "salvarsan."[1] This term is to signify the chemical compound dioxy-diamino-arsenobenzol-di-hydrochloride and nothing else. As was perhaps to be expected, persons having no claim to medical knowledge or skill have already sought to exploit to their own advantage the great amount of public interest excited by the announcements made in the newspapers last autumn. They advertise that they will treat patients with "606," but it is at least doubtful whether it could be established to the satisfaction of a jury that "606" meant dioxy-diamino-arsenobenzol-di-hydrochloride and nothing else. It may, of course, be that the people who at present advertise that they will treat persons who apply to them with "606" employ dioxy-diamino-arsenobenzol-di-hydrochloride, but there is no guarantee that they and their rivals or successors will do so in the future, and it must be remembered

[1] A good account of the chemistry and pharmacy of salvarsan with a history of its introduction will be found in *Salvarsan*, by W. Harrison Martindale, Ph.D., F.C.S., and W. W. Westcott, M.B.Lond., D.Ph. (London: H. K. Lewis, 1911, 5s. net.) The volume also contains therapeutic notes

that all the organic arsenic compounds are two-edged weapons. They may do good, but imprudently used may do a great deal of irreparable harm. In the first place the question of diagnosis arises, and this, as is well known, may be difficult; in fact it has been suggested that the remedy ought not to be used until after a Wassermann reaction has been found. The number of deaths which can be attributed to salvarsan is small, but cases have occurred, and it would appear that the supposed immunity from optic atrophy which was believed to distinguish salvarsan from other organic arsenic preparations is not invariable. A man who found himself hopelessly blind for life would be justified in thinking the cure worse than the disease.

A GOSPEL OF DIRT.

SIR ALMROTH WRIGHT has been lecturing to the National Health Society on bacteriology and hygiene, and some fragments of his discourse have found their way into the newspapers. How far these accurately represent what he said we do not know, but, as he has not taken the trouble to repudiate the statements attributed to him, we may assume that they are fairly correct. As to washing, he is reported to have said that there was a belief that people washed off the microbes. We did, he went on, take off a certain amount of microbes, but we also destroyed the protective skin which was all round our bodies like the tiles of a house. When one had a horny hand no microbe could ever get through the skin. If one had a skin like a tortoise microbes would never get through. To have a Turkish bath was to take away one's horny protection, and he objected to that. With regard to fresh air, why was it only applied to tuberculous disease? He held it to be a dreadful superstition. The whole of the doctrine of fresh air required to be revised. He did not feel that, with regard to public, domestic, or private hygiene, we had reached any valuable knowledge, and if we never applied that which we had we should not be much worse. Epidemic diseases were but incidents, and did not matter much; the permanent disabilities were local infections. Hygiene was a question of fighting microbes. It was said that prevention was better than cure. He did not believe it. And so on, in the style to which we have become accustomed. Some one defined dirt as matter in the wrong place; we gather that Sir Almroth Wright holds the contrary view. Lord Justice Fletcher Moulton, who was in the chair, seems, in the language of the police courts, to have felt his position and tried to explain away the opinions expressed by Sir Almroth Wright by suggesting that he wished to arrest the attention of his hearers. This, we take it, exactly expresses the intention of the distinguished lecturer. Like a true artist, Sir Almroth Wright loves *épater le bourgeois*. As an Irishman he is *ex vi termini* a wit, and it doubtless delights him to see the dull-witted Britons take him seriously. But he might be more original. His gospel of dirt is not new. The essence of it was preached to a somewhat unappreciative world by another oracle of science, Dr. John H. Clarke, a few years ago in his book entitled *Vital Economy*. Long before him an eminent German professor had cried *Fort mit dem Bad!* The doctrine was practised wholeheartedly in the early Middle Ages, when the prevention, which Sir Alemroth Wright does not believe in, was yet unheard of. It is true that nations were then decimated by epidemics; but we now have it on high scientific authority that such things do not matter. Sir Almroth Wright's prophetic vision sees the man of the future living, like St. Simon Stylites, an intellectual machine on a tripod. Of course, the tripod will be carefully sheltered from the open air. We suppose this embodiment of the new hygiene will have cultivated a thick layer of dirt on his skin, and—perhaps with the occasional use of a vaccine to cure the pimples that may "grow" like Topsy—he will live happily, freed from the superstitions of soap and open air, and die at last in the odour of unwashed sanctity.

WE regret to record the sudden death on March 21st of Dr. Leonard Sedgwick, who has not long survived Mr. Henry Power, co-editor with him of the *Lexicon of Medicine*, issued by the New Sydenham Society. We hope to publish some account of his career in an early issue.

THE scheme for the establishment of an international university at The Hague, drawn up by Professor Nippold, seems to be in a fair way towards realization. The international committee, formed at the suggestion of Mr. Carnegie, and in which Holland is represented by Mr. Asser, the Secretary of State, has considered proposals made by various countries. Among these is one from America which would involve an outlay of ten million dollars for the necessary expenses, and which includes the provision of an institution for the residence of students. The University will be erected in the neighbourhood of the Peace Palace.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Public Health (Ireland) Bill has passed through Standing Committee A, and reported to the House with amendments. The amendments limit the bill to the inspection of meat intended to be sold in any urban district, and the prohibition of its sale if necessary. The bill will be considered on an early day, and will probably be the first private member's bill to pass this year.

The Coal Mines Bill, which passed its second reading last week, has 123 clauses, and is drawn so as to consolidate the law regulating the coal mining industry. It contains many new provisions of great importance in connexion with ventilation, supervision, the use of safety lamps, and the employment of children. Boys under 14 years of age will not in future be allowed to work underground, and girls and women are excluded altogether. In addition to provisions for lessening the danger of the miner's calling, there are clauses for protecting his health by insisting that sanitary conveniences shall be established, and also baths, to be used on coming out of the pit, and there are also provisions dealing with disease which may be acquired by working in the mine. The bill was very favourably received, but it was nevertheless a very noteworthy feat on Mr. Churchill's part to pass it through the second reading stage in less than two hours.

The Health Visitors Bill, introduced last week by Mr. Burns, enables local authorities under the Notification of Births Act, 1907, to appoint health visitors. Suitable women, to be known as health visitors, for the purpose of giving advice as to the proper nurture, care, and management of children under 5 years of age, and as to the promotion of cleanliness, may be appointed by local authorities outside London. The qualifications of health visitors will be settled by the local authority after consultation with their medical officer of health.

The Rag Flock Bill, which Mr. Burns presented last week, seeks to prohibit the sale and use for the purpose of the manufacture of certain articles of unclean flock manufactured from rags. Flock made from rags will have to conform to a standard of cleanliness laid down by the Local Government Board, and any person having in his possession for sale, or the making of upholstery, cushions, or bedding unclean flock will be liable to a fine of £10, or for a second offence £50. It will be the duty of the sanitary authority to enforce the Act through the medical officer of health or the sanitary inspector. Samples of flock are to be taken for analysis and examination. The expenses of administration, except in the City of London, will be incurred under the Public Health Acts.

Health Resorts and Watering Places Bill.—Last week this Bill to empower local authorities in England and Wales to levy a rate for advertising health resorts and watering places, was presented by Sir Thomas Roe. The supporters of the Bill are Sir Luke White, Mr. Theodore Taylor, Mr. Nield, Mr. Alden, and Mr. Raffan. It will be remembered that a similar Bill was passed for Ireland a year or so ago.

Rebate on Petrol (Medical Practitioners).—In answer to Mr. Ginnell last week, Mr. Hobhouse stated that under the provisions of the Finance (1909-10) Act, 1910, a medical practitioner was not entitled to any rebate in respect of the duty of motor spirit used for supplying motive power to a motor car kept for the purpose of his profession, except on proof, to the satisfaction of the Commissioners of Customs and Excise, that the full duty had in fact been paid to the Crown on the spirit so used. The duty was not paid by the medical practitioner himself, nor by the dealer from whom he bought the spirit, but by the importer or manufacturer, and any voucher or certificate of payment of duty given by a dealer to a purchaser must be verified by the Customs and Excise authorities at the source at which the duty had been charged. Where claims for rebate could be so verified they were at once allowed, but the Commissioners of Customs and Excise could not admit a claim where evidence that the duty had in fact been paid was not satisfactory. The practice of the Commissioners in dealing with claims for rebate was the same, whether the claims related to the year 1909-10 or 1910-11.

Dentists' Motor Cars.—In answer to Mr. Wilkie Mr. Hobhouse stated last week that the relief allowed in respect of motor car licence duty and motor spirit duty to duly qualified medical practitioners under the Finance (1909–10) Act, 1910, was not applicable to dentists using motor cars. He might point out that the saving of human life and suffering frequently depended upon a medical man possessing an expeditious means of locomotion, and in this respect the case of a dentist was not parallel.

International Hygiene Exhibition, Dresden.—Sir Herbert Raphael asked the Secretary to the Admiralty last week whether his attention had been called to the fact that several of the medical officers of his department had resigned their membership of the British Committee formed for the purpose of preparing a British exhibit at the International Hygiene Exhibition at Dresden, on learning of the decision of His Majesty's Government not to support this exhibition; and whether, in view of the recent expression of commendation addressed by the President of the Board of Trade in the name of the Government to the chairman of the committee, he would advise these gentlemen to join the committee again and assist in preparing a suitable exhibit in connexion with diving, naval hygiene, and other cognate matters. Mr. McKenna said that he was unaware whether naval medical officers had at any time taken part privately in the work of the committee. None had joined it officially. The Admiralty could not undertake to send an exhibit, and he regretted, therefore, that he could not act on the suggestion contained in the second part of the question. Mr. Byles then asked the Home Secretary whether he agreed to the inclusion of the names of Dr. Smalley and Captain Eccles, of the Prison Commission, in the list of the British Executive Committee for the International Hygiene Exhibition at Dresden; and whether he proposed to send delegates to the conferences on prison hygiene and on factory legislation and regulations which were to be held in connexion with that exhibition. Mr. Churchill said that he understood that the organizer of the Scientific Department of the British Executive Committee sent an invitation last year to Dr. Smalley and Captain Eccles to join the committee, and that he was informed by the Prison Commissioners, to whom the matter was referred, that no objection would be raised to their doing so. Nothing further had been heard on the subject, nor had the Home Office received any invitation to send delegates to conferences either on prison hygiene or on factory legislation to be held in connexion with the exhibition.

Vaccination and Small-pox.—Last week Mr. Staveley Hill asked several questions on this subject. He first asked as to the efficacy of vaccination and the steps being taken to secure vaccination and revaccination. Mr. Burns replied that small-pox was a contagious disease, and the most effective means of preventing its spread from the person attacked consisted in removing the patient to a place of isolation and surrounding him by protected persons. Statistics relating to vaccination and small-pox obtained by the department were published, and he did not think it necessary to attempt to interpret them. Boards of guardians were empowered by Section 28 of the Vaccination Act, 1867, to pay reasonable expenses incurred by them in taking measures to promote vaccination upon any actual or expected outbreak of small-pox. His officers had visited the districts in London recently affected by small-pox, and had conferred with the officials of the authorities as to the measures to be taken. In reply to another question by Mr. Staveley Hill, Mr. Burns said that the Local Government Board had not taken any general action in regard to loss of income sustained by vaccination officers since the operation of the Vaccination Act, 1907. The Board had sanctioned gratuities to meet the loss of income in the past and had suggested to the guardians that where the deficiency was likely to be permanent the officers' fees should be increased. Many boards of guardians had adopted this suggested, and the Board had sanctioned increased fees. In some cases vaccination officers had informed the Board of the loss they had sustained and that their guardians had not taken any steps to make up the deficiency. In these cases the Board had written to the guardians setting out the average earnings of the vaccination officers in 1903–7 and the earnings since, and had suggested to the guardians that they should award gratuities based on the figures given and increase the officers' fees. Some boards of guardians had adopted the Board's suggestion, but others had declined to take any action. There were about twenty-five of the latter cases. In answer to a further question as to the areas in which small-pox had been notified this year, Mr. Burns said the following list showed the counties in which cases of small-pox had been notified since January, 1911, and the number of cases notified in each: Cheshire, 8; Durham, 13; Essex, 2; Glamorgan, 1; Hertfordshire, 1; Lancashire, 26; London, 58; Middlesex, 1; Norfolk, 8. Total, 118.

The Number of Conscientious Objections.—Mr. Burns stated that the number of certificates of conscientious objection to vaccination received by the vaccination officers in respect of children whose births were registered during 1906 was 53,828. The numbers of certificates actually received in the years 1907–9 and in the first half of 1910, irrespective of the dates of the birth of the children, were: 1907, 57,675; 1908, 162,799; 1909, 190,689; 1910 (first half), 110,851. The

Board had not allowed boards of guardians to pay a fee to their vaccination officers for each statutory declaration of objection to vaccination received.

The Free Supply of Lymph for Vaccination.—Mr. Snowden asked whether the town clerk of Stalybridge had sent a circular to all the medical men in his town offering a free supply of lymph for vaccinations; whether the Local Government Board had supplied this lymph; whether, in that case, his attention had been called to the fact that only public vaccinators might legally be supplied with it; whether the Stalybridge Corporation was offering free re-vaccination; and, if so, whether he proposed to take any action in the matter. Mr. Burns said that the Local Government Board had not supplied lymph to the Corporation of Stalybridge, but, except as to this, he understood the facts were generally as stated in the question. No action on his part seemed to be called for. To the best of his knowledge the circumstances or statistics of the recent outbreak of small-pox had not thrown doubt, in the opinion of medical officers, upon the utility of vaccination as a preventive of the disease.

Diphtheria and the Use of Antitoxin.—Mr. Chancellor asked a question as to the action of the medical officer of health for Islington in recommending the use of antitoxin the moment diphtheria was suspected, and inquired if any action would be taken, seeing that antitoxin had been definitely proved to have caused death in healthy persons. Mr. Burns replied that he had seen the report referred to, but he did not propose to interfere with the discretion of the local authorities in acting upon the provisions of the order recently issued. Dr. Addison then asked whether it was not a fact that of some 8,000 cases of diphtheria treated with antitoxin in the Brook Hospital, London, the results were as follows:

Number of Cases.	Day of Disease on which Antitoxin was Given.	Case Mortality per Cent.
2,135	First	0.0
1,441	Second	4.3
1,600	Third	11.12
1,276	Fourth	17.24
1,645	Fifth or later	18.72

And whether, in view of the uniform experience of officers of fever hospitals, that the sooner antitoxin was administered in cases of diphtheria the better it was for the patients, Mr. Burns would use every endeavour to make this invaluable remedy as early, and as easily, available as possible to poor persons afflicted with this terrible disease. Mr. Burns said that the facts might be as suggested, but they did not arise out of this question. Mr. Chancellor asked whether—seeing that Section 77 of the Public Health (London) Act, 1891, and Section 133 of the Public Health Act, 1875, under which the Local Government Board Order authorizing local authorities to supply diphtheria antitoxin free was made, applied only to cases of a temporary nature—that Order would be withdrawn. Mr. Burns answered that the fact that the sections under which the orders authorizing the supply of antitoxin had been made referred to the provision of a temporary supply of medicine and medical assistance did not, in his opinion, necessitate or render desirable the withdrawal of the orders. He was not in a position to say how many local authorities were supplying diphtheria antitoxin to medical practitioners out of the public rates. Asked further as to whether the Kensington Borough Council had offered a fee of 5s. for every inoculation and how many other authorities had done the same, and if he sanctioned the use of public money as a premium on a form of medical practice, Mr. Burns said that as regards the authority for the orders issued by the Local Government Board in August last empowering local authorities to provide diphtheria antitoxin, he might refer to the answer of November 23rd last. By the terms of the order the arrangements as to the keeping, distribution, and use of the antitoxin were required to be in accordance with the advice of the medical officer of health. He had no complete information as to the arrangements which had been made in Kensington or elsewhere.

Plague in India.—Last Friday Mr. Montagu stated, in answer to Mr. Keir Hardie, that the virulence of the epidemic normally increased each year during the cold weather and diminished rapidly when the hot season set in in April. During the present cold weather it had been more severe than in any of the last three years, notwithstanding the fact that 1910 showed a very large increase over 1909 and 1908. Deaths last month numbered 88,498. The disease was worst in the United Provinces, South-Eastern Punjab, and Western Bengal. It was, he need hardly add, a matter for profound concern to the Government that this disease did not show much sign of permanent improvement despite the persistent, and he might truly say heroic, efforts of our doctors and administrators.

Maintenance of Sewers.—Sir Fortescue Flannery asked the President of the Local Government Board whether his attention had been called to the error in drafting Section 19 of the Public Health Acts Amendment Act, 1890, upon the subject of the ownership and responsibility for maintenance of sewers, so that under that section a private drain taking the drainage of more than one house belonging to the same owner was a sewer, repairable by the local authorities, whereas in cases of houses similarly drained but belonging to different owners the local authorities were not responsible for them; whether the Local Government Board had received a memorial asking that a private bill drafted to rectify this mistake should be accepted as a Government measure; and whether the Government could see their way to adopt the Bill or to assist it as a non-contentious measure. Mr. Burns said that he was aware of the difficulties that surrounded the present law with regard to sewers and drains. He had received the memorial alluded to in the question. Without expressing any opinion on the merits of the private bill to which reference was made, he might say that he should be very glad if it were possible to arrive in a non-contentious manner at a settlement of the problem, and he believed that efforts were being made to that end.

A Question of Precedence: Royal College of Surgeons and College of Physicians.—The Marquess of Tullibardine asked the Lord Advocate under what authority the Secretary for Scotland recently advised or instructed the Lord Lyon King of Arms to refuse to decide a question of precedence between the Royal College of Surgeons and the College of Physicians; and whether the Secretary for Scotland has any jurisdiction, direct or indirect, over the Lyon King of Arms as such. Mr. Ure answered that questions of precedence were, in the view of the Secretary for Scotland, exclusively for the Sovereign to decide. The jurisdiction of the Lyon King was exclusively statutory, and did not embrace questions of precedence. And the Lyon King having invited an expression of opinion on the question referred to by the noble lord, received an answer on the lines above indicated.

Epilepsy and Postal Work.—Mr. Clynes asked a question as regards the discharge of a postman at Manchester on medical grounds by Dr. Watson, and Mr. Herbert Samuels replied that the medical officer's opinion that Mr. Potts suffered from epilepsy was based not only on personal examination but on admitted attacks of fainting in circumstances tending to confirm the diagnosis, and to establish Mr. Potts's unsuitability for the duties of a postman. With the facts now before him he did not think further examination necessary; but any evidence which Mr. Potts desired to produce would be considered carefully.

England and Wales.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

LONDON.

SITE FOR THE PROPOSED MENTAL HOSPITAL.

ON March 21st the Asylums Committee reported to the London County Council that a site had been found for the proposed mental hospital, towards the cost of which Dr. Henry Maudsley has promised a gift of £30,000. This offer was accepted by the Council on March 31st, 1908, and on June 29th, 1909, a capital estimate of £41,000 was approved. The committee stated, as the cause of the delay that had occurred, that almost immediately after the expenditure had been authorized the vendors of a site then before the Council withdrew their offer to sell. Since that time the committee had given careful consideration to a number of other possible sites, and was now in a position to submit particulars of one which seemed thoroughly suited to the purpose. The property consisted of two residential houses, Nos. 107 and 109, Denmark Hill. The site was about 600 ft. long by 300 ft. wide, and some 4½ acres in area; Denmark Hill station, Ruskin Park, and the site of the new King's College Hospital were near the property. The price asked for the freehold land and buildings was £10,000. The site had been approved informally by the Commissioners in Lunacy. It was estimated roughly that the cost of building and equipping a hospital for 100 patients would be £40,000, which, with £10,000 for the site, pointed to a total capital expenditure of approximately £50,000. Sufficient provision had been made in the capital votes for the current financial year to cover the purchase money, and the committee understood that Dr. Maudsley was only waiting for the Council's consent to hand over the amount of his promised donation.

In accordance with standing orders the consideration of the report, as one involving an expenditure of over £5,000, was adjourned for a week.

ASYLUM INS AND OUTS.

At the same meeting the Asylums Committee submitted, for the information of the Council, particulars of the case of a male patient, aged 37, admitted to Banstead Asylum on February 13th, 1911, for the eighth time. Information supplied by the board of guardians to whom the patient was chargeable showed that apparently he had his first attack of insanity at the age of 15, and had been in other asylums besides those under the control of the Council; in fact, he had been in thirteen altogether. The man married in 1903, and there were five children by the marriage, ranging from 13 months to 6 years and 10 months. All the children were now chargeable to the guardians of a London parish. The whole family had been in receipt of indoor or outdoor relief at intervals since 1906. These facts, the committee considered, indicated the great difficulty of dealing with cases of recurrent insanity, upon which comment had been made in more than one annual report of the Asylums Committee. As the law stood at present such cases must be discharged as soon as they were apparently recovered, but it was often quite evident that with the removal of the restraints of an asylum, and the resubjection of the patient to the stress and hardship of normal existence, he would speedily break down. Moreover, as in the present instance, opportunity was afforded by the intervals of liberty for the propagation of children who must share in the mental and nervous instability of the parent, and who in their turn would probably swell the number of persons for whom asylum accommodation and care had to be provided.

MEDICAL INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

The Hospital Scheme.

At a meeting called by the Fabian Society at Clifford's Inn Hall on March 16th, Sir Victor Horsley in the chair, the London County Council's arrangements for the medical inspection and treatment of school children were the subject of discussion. The room was well filled with an audience consisting of medical men, social workers and "persons interested in education," in the words of the Act of 1902. The various speakers condemned the hospital scheme of treatment and urged that school clinics should be established.

Sir Victor Horsley emphasized the importance of medical inspection, and said that the plans carried out by the Council at present did not fulfil the intentions of the Act of 1907. The Council's action amounted to a breach of faith with the nation; instead of taking selected schools and inspecting a few children the Council should have done the work thoroughly. Alluding to the Education Committee's recent report recommending that Dr. Kerr should be placed in the department of the Education officer for the purposes of school medical work, the Chairman said that such an arrangement would be ridiculous from a medical point of view. All that was provided was that Dr. Kerr, whose duties were of primary importance, should have access to subcommittees! Dental treatment, which the Council had scarcely begun to undertake, was of paramount value.

Mr. R. A. Bray, L.C.C., described the arrangements for school medical work as approved by the Council and reported in the JOURNAL from time to time during the last three years.

Dr. H. Beckett-Overy spoke strongly in favour of school clinics, urging that the children needed a centre to which they could go conveniently every day. Most of the ailments from which they suffered needed not so much treatment by a specialist as constant attention by a nurse under the supervision of a doctor. In the case of adenoids, for example, the actual operation was not of so much importance as physical and breathing exercises afterwards.

Dr. Marion Phillips spoke of the incomplete fashion in which medical inspection was carried out, and of the difficulties parents had in taking their children to the hospitals for treatment.

Dr. Hastings urged that the hospitals did not want the routine work of medical treatment, but only the "interesting" and difficult cases.

Other speakers urged that a vigorous campaign should be inaugurated to persuade the Council to establish school clinics, and that definite information as to their cost and practicability should be furnished.

Criticism by the Board of Education.

At the end of last year the London County Council decided to ask the Board of Education to sanction the renewal for twelve months of some of the first agreements entered into with hospitals for the medical treatment of school children, the view of the Council being that sufficient time had not elapsed to give the present scheme a fair trial (BRITISH MEDICAL JOURNAL, December 31st, 1910, pages 2041–2). The Board's reply was that it could not sanction an extension of more than six months, and it entered into a long and exhaustive criticism of the hospital scheme of treatment. This letter was withheld from publication pending the preparation of a detailed reply by the Children's Care Subcommittee, and the two documents —the letter and the reply—were submitted to the Education Committee of the Council on March 22nd.

The Board of Education first commented upon the "incomplete findings" in regard to only six hospitals, upon which the Council relied in asking for a year's extension of the present arrangements. The absence of the report on the first year's working, promised at the beginning, was "very disappointing." The Board regretted that, at all events up to the end of November last, no effective remedy had been applied to the incidental or inherent defects of the scheme as pointed out by the Board's chief medical officer. Unless the Council's administration was to be gravely discredited it was essential that the machinery for selection and following up of ailing children should be reformed without any delay. The letter went on

to specify the "graver defects" in the Council's scheme. These were, briefly:

1. Treatment was divorced from inspection, the medical officer (Education) administering the latter and the Education officer the former. [Proposals are now under consideration by committees of the Council for dealing with this matter (BRITISH MEDICAL JOURNAL, March 11th, pp. 588–9).]
2. Under the present arrangements no officer of the Council visited the hospitals systematically to obtain first-hand information as to the working of the scheme. Unless officers of the Council were in close and continual touch with the hospitals, regular attendance of children could not be secured, and the system must be extravagant and ineffective.
3. The Board doubted if it would be wise to increase, as proposed, the number of cases sent to the six hospitals whose agreements were under consideration, the machinery having already proved unequal to the strain. The children attending these hospitals came from too wide an area. The child population of several of the densest areas of London was out of reach of any existing hospital, and could only be reached by school clinics.
4. The Board, in sanctioning last year the Council's "experimental" proposals for making use of hospitals, never desired that they should be made applicable to the whole metropolis, and could not resist the conclusion that present difficulties arose from experimenting on too large a scale.
5. The late date of applying for sanction to renewal had occasioned the Board needless difficulty; if sanction was withheld, no treatment might be available, and even the present scheme was better than none at all.

On these grounds the Board declined to sanction renewal for more than six months, but, as has been reported already (BRITISH MEDICAL JOURNAL, February 4th, p. 274), the Council made a further appeal asking that all agreements might be made to conclude on December 31st next. To this the Board, in a letter dated March 14th, replied that it was constrained to agree that much time would indeed be required to work out a systematic scheme. Subject to an assurance that the present arrangements would not continue during the whole of 1911, but that a new scheme would be in at least partial operation by October, the Board would accede to the request.

The Children's Care Subcommittee addressed itself, in reply to the Board's letter, to the question of what temporary improvements could be made pending the settlement of the larger matter of organization as between Dr. Kerr and Mr. Blair. The subcommittee advised that organizing officers should attend the hospitals (subject to the concurrence of those institutions) and assist in securing that children needing treatment attended at the hospitals, and were "followed up" afterwards, and that the Council should pay for increased clinical assistance at the hospitals.

It was reported to the Education Committee at the same meeting that arrangements are being made to provide dental as well as other treatment at the centres managed by the medical practitioners at Wandsworth and Norwood.

COUNTRY HOMES FOR TUBERCULOUS JOINT DISEASE.

A conference organized by the Invalid Children's Aid Association was held at Denison House, Vauxhall Bridge Road, on March 15th, for the purpose of bringing about a better co-operation between the London surgeons and the staffs of the surgical or nursing homes in the country to which children suffering from tuberculous disease of the hip, knee, spine, and other joints are sent for prolonged rest and other forms of treatment. Sir William Bennett, who was in the chair, made special reference to the types of nursing or convalescent homes to which invalid children are sent. In some the medical staff consisted of general practitioners residing in the neighbourhood who visited the institution occasionally, while in others there was an organized medical staff. With regard to the difficulties which arose in connexion with these two types of homes, he read three letters. In the first, the writer stated that the practice of his home was to carry out the treatment prescribed by the London surgeon, unless some complication arose which rendered it advisable to change it. From the second letter the staff appeared to be of opinion that the treatment must be left in the hands of the surgeon at the home. In the third letter it was pointed out that difficulties arose when the instructions of the London surgeon were not specific or were wanting altogether, when no history of the case was given to the medical officer of the home, and when no intimation was given by the London surgeon as to whether the splint or other instrument was to be worn for weeks or months. These homes did not alter the treatment of the London surgeon without first communicating with the association. Sir William thought that an understanding could be arrived at if there were a little give and take on both sides.

Mr. T. H. Openshaw, speaking from the point of view of surgeons attached to the London hospitals, said that the whole question turned upon the kind of homes to which the children were sent. He recognized that the workers of the Invalid Children's Aid Association had effected much improvement in these homes, and a large number of the visitors now kept in touch with and to a certain extent controlled the homes. The treatment prescribed by the surgeon depended for its success on continuity. He hesitated in sending cases to some of these homes, because of the risk of want of this continuity. When the house-surgeons or other medical officers of the homes materially altered the treatment they should take over the whole responsibility of the case. Mr. Openshaw thought that the ideal condition would be for the State to take over the treatment of every case of surgical tuberculosis, to place it in the hands of the county to deal with it until complete recovery ensued. It was, however, too early to advocate such a proposal. In turning to the actual state of affairs, he found that the surgeon could apply medicinal remedies and injections, warm clothing and the like, in London as well as in the country. Better air and better food were, no doubt, obtainable in the country than in London. If rest, continued for a very long period, were not to be had in the country, he would prefer to do without the better air and food and keep the children in London. Speaking of the special conditions applying to hip-joint disease, he said that he now made it a rule to keep the limb at rest in a splint for at least twelve months after pain has disappeared. Until the workers of this association, the matrons of the homes, and the staffs of the homes became convinced of the wisdom of this rule, it would be impossible for the treatment to be successfully carried out. In his experience, knee cases did better than hip or spine cases, because he put them up in plaster-of-Paris, and this was troublesome to remove and reapply. He repeated that since the essential for success in the treatment of tuberculous disease of the joints was prolonged rest, he could not agree to a change of treatment after he sent his cases for this purpose to a home.

Mr. Gerald Sichel, speaking as a general practitioner on the staff of a convalescent home, said that the medical men undertaking this work should not be regarded as mere dressers. He was only too glad to have the suggestions with regard to treatment from eminent surgeons, but it was necessary at times, in the interests of the patients, to make changes in the treatment.

Mr. H. M. Raven pointed out that no information was available and no instructions were sent by the London surgeon with the patient. He found it best to try to get his cases from a certain hospital, since he knew what the surgeons at that institution desired with regard to the continued treatment.

Mr. Crowley spoke of the difficulty of getting information from surgeons in London. He had nineteen patients from various London hospitals, and only in two cases had he received a word of explanation when the patients were sent to him. Mr. Openshaw had objected to the splints being taken off at all, but it was necessary to replace the old splints by larger splints from time to time as the child grew. When the cases came through the Invalid Children's Aid Association, a short note was usually sent with regard to the treatment prescribed in London. He agreed with Mr. Openshaw that rest for a long period must be kept up. He thought that the medical officer of the

home should be able to carry out the treatment required for abscess and other complications.

Miss Fitch, speaking of the special work of the Alexandra Hospital and its convalescent home, said that a child was never sent to any outside convalescent home when it was still lying down; it was either kept in hospital or sent to the hospital's own home.

Mr. McAdam Eccles drew a distinction between true convalescent homes where non-tuberculous cases were sent to recover from a past illness and treatment homes, where tuberculous cases could be sent for long-continued treatment. He thought that in the latter institutions measures should be adopted for the education of the children, while they were kept at rest. These homes were much more expensive than true convalescent homes. He recognized from the speeches delivered by the medical officers of homes that the patients were in these instances at all events in good hands. Good nursing and efficient medical staffs were essential for successful treatment. He advocated more and closer co-operation between the staffs of the homes and the surgeons who sent their patients to the homes.

Mr. T. H. Kellock expressed himself satisfied with the way in which the children are treated in the homes. The intelligent medical officers of these homes did not need specific instructions with regard to the treatment. In criticizing Mr. Openshaw he asked why he did not put up his hip cases in plaster-of-Paris if he got such good results in this way in his knee cases.

Miss Broadbent spoke of the diminution of tuberculous cases, and especially of severe cases during the past twenty years, and, dealing with the work of the Invalid Children's Aid Association, said that some homes had to be avoided because the splints were taken off early. There was sometimes difficulty in getting information with regard to the cases; almoners could not be trusted.

Mr. J. W. Haward thought that the discussion had revealed a desire of the surgeon in London and the medical officer of the home to co-operate better in the future than in the past. He would not attempt to dictate to the medical officer of the convalescent home, but would trust the judgement, care, and skill of those who were good enough to undertake the treatment of the cases.

Mr. Crowley then moved and Mr. Sichel seconded:

> That on the application forms for admission into nursing homes separate lines should be filled up, indicating the form of treatment adopted in the past and recommended for the future.

After considerable conversational discussion, in which an objection was raised by Mr. Openshaw that this resolution might pledge him to approve of the treatment adopted in the homes, Mr. Haward suggested as an amendment:

> That it is desirable that in all cases applying for admission to a surgical home information should be furnished with regard to the treatment adopted in the past and recommended for the future.

It was pointed out that the practical question as to who should supply this information would be left undecided by this resolution.

Mr. Crowley accepted the amendment and formally seconded it. The amendment was carried.

The meeting then terminated.

MANCHESTER AND DISTRICT.

Small-pox in Lancashire.

Up to the present there seems to be little more than suspicion that the outbreak of small-pox at Bury is to be attributed to the handling of raw cotton. At Stalybridge four cases have occurred, but here the authorities are inclined to think that the source could not have been cotton, as the first case which gave rise to the others was not a cotton worker, and, so far, no likely source has been found. At Bury, however, the first case was a girl engaged on the cotton in the first process after the opening of the bales. The man who opened the bales had been vaccinated, and had well-marked scars, but the girl had never been vaccinated; the disease was not recognized until it had reached its third week, and for more than a week she had been working among hundreds of other operatives who had noticed the pustules on her face. There is thus no wonder that many of the subsequent cases were directly traceable to her. Up to the time of writing 23 cases have occurred at Bury, of whom 20 are women or girls. Most of them have the disease in an extremely mild form, except where they have never been vaccinated, but, so far, all are doing fairly well. A scare occurred at the mill where the girl first attacked had been working, and the operatives, 300 in number, refused to continue work. The mill is said to be one of the cleanest in Lancashire, but as soon as the first case was discovered much of the raw or partly finished material was burnt and the rest of the stock thoroughly disinfected. The Girls' Grammar School has also been temporarily closed for disinfection, as a relative of one of the girls had contracted the disease. It is stated that many of the workpeople have refused to be vaccinated as a precautionary measure, though some of the authorities have offered free vaccination and several hundreds have been vaccinated. In some previous epidemics in Lancashire there has been good reason for believing that the source of the infection was in Egyptian cotton, but in the present case it appears that only cotton from the Southern States of America was being used, and it yet remains to be proved whether or not it could have been the cause of the present epidemic.

The Manchester and Salford Provident Dispensaries.

In the thirty-sixth annual report of the Provident Dispensary Branch of the Manchester and Salford District Provident Society the council states that there has been a decrease in the membership of 337, the total number of members at the end of the year 1910 being 14,887, in addition to 2,434 children under 14 years of age from whom no subscription is required. The new members enrolled during the year were 2,466, but the withdrawals were 2,803, these being due to deaths, removals, joining friendly societies where medical attendance is provided, lapses through non-payment of subscriptions, etc. The society is managed by a lay council, with some slight representation of the medical men, and there are nine branch dispensaries. Taking the receipts and expenditure of the whole of the branches together, there was a gross surplus of £139, but from this have to be deducted some payments out of surplus to the medical staffs, grants to the council and certain donations, leaving a net loss of £1 4s. 8d. The member's subscription is 1d. a week, with an entrance fee of 6d., and 1d. is charged each time a member is supplied with medicine. Applicants for membership who are ill at the time are only admitted on payment of an entrance fee of 5s., and the whole of the family of the applicant must join at the same time. Any member is considered sick and required to pay accordingly if he apply for medical aid within a month of his admission to membership. Female members may be attended at their confinements upon payment in advance of 15s.; if a medical officer who has not attended the confinement is called in to any serious complication arising out of confinement within a month of the time of delivery, the member must pay the medical officer a fee of 10s. 6d. Every member may select from the dispensary staff the medical officer by whom he wishes to be attended, if there are more than one, but no change must be made during an illness without the consent of the committee. The least satisfactory feature of the society is the large amount spent in management and other expenses; the total income of the nine branch dispensaries, including members' subscriptions, payments at entrance and for medicines, interest, and sundries, is given as £4,139 6s. 1d., and of this only £1,695 1s. 11d. was paid to the medical officers, while no less than £505 was paid for collection, £363 for rent, rates, and taxes, £1,134 for drugs, bottles, and dispensing; after payment of various sundry expenses, there was, as has been said, a net loss of £1 4s. 8d., the

sum of £31 19s. having been transferred to a reserve fund account. This may be put in another way, for, omitting all other sources of income, the receipts for members' subscriptions and entrance fees alone amounted to £3,187, and the fact that the sum paid to the medical staff was £1,695, means that only slightly more than half of the members' payments reached the medical officers. The total number of prescriptions dispensed during the year to the 14,887 paying members was 127,398, an average of 8.55 prescriptions per member, the number varying in the different dispensaries from 5.14 to 11.9 per member. Taking this side by side with the amount paid—£1,695—to the medical officers, it will be seen that the medical officers received less than 3¼d. each time a prescription was dispensed. Moreover, it must often happen that visits are made to members at their own homes without a prescription being required each time, so that the actual remuneration per visit or consultation must be reduced very considerably. In previous reports the number of visits and consultations actually made was stated for some of the dispensaries, but in the present report this useful information is omitted. Of course the small payment of a penny for each supply of medicine by no means covers the actual cost, for the total payments for medicines, cod-liver oil, and bottles amounted to £763 19s. 3d., while the expenditure on drugs, oil, corks, bottles, and dispensing amounted to £1,134 4s. 10d., and the deficit of £370 5s. 7d. is thus a tax on the amount available for the medical officers. To sum up, the Manchester and Salford Provident Dispensaries afford a good example of the results of lay management of sick clubs.

The report further gives the results of the investigations of the officers of the District Provident Society into the circumstances of applicants for charitable medical relief at certain of the Manchester and Salford hospitals. We are told that the percentage of those found to be entitled to gratuitous medical treatment was 94·9, being, out of the total number visited, 0.20 more than in 1909. At the Royal Infirmary the percentages of those who were found to be able to subscribe to a provident dispensary were in 1909, 7 per cent., and in 1910, 6 per cent. At the Manchester Northern Hospital the percentages were in 1909, 6 per cent., and in 1910, 5 per cent. At the Ancoats Hospital the percentages were in each year 4 per cent., and at the Salford Royal Hospital 3 per cent. It is not stated what standard is applied in giving these figures, and little value can be attached to them, though they are often quoted, because the officers of the District Provident Society only deal with cases referred to them by the hospitals, while as to the circumstances of a very large percentage of the patients at the hospitals no investigation at all is made.

THE LANGHO INEBRIATES HOME.

The annual report of the medical superintendent, Dr. F. A. Gill, of the Langho Inebriates Home, states that 227 women have been discharged, and of these 34 were doing well, 17 were much improved, 88 had relapsed, 13 had died, and 50 who were imbeciles had been transferred to the State reformatory, while 10 were not traceable. It is remarked that the reclamation of 15.8 per cent. of confirmed criminal inebriates may seem a poor result, but eliminating the obviously hopeless, the aged, and the bodily infirm, the percentage was raised to 51.3, which was no mean achievement. It is also pointed out that reformation is not the only object, as society demanded protection from those who could not or would not obey its behests. Experience showed that in about 60 per cent. of the cases inebriety was due to, or associated with, some degree of mental defect, and it was a mistaken conception of the cause of inebriety to exact a full degree of responsibility from these unfortunates, and to punish them as if they were sane and responsible. Mr. J. T. Travis Clegg, Chairman of the Lancashire Inebriates Board, said much had been said about the decline in the birth-rate, and, unfortunately, the decline was not taking place among the unfit, where it might prove a blessing in disguise. Among the inebriate classes families were growing beyond normal, and he would be content to risk further decline in the national birth-rate if it was brought about by the prevention of the propagation of children by those who, like the unfortunate women at Langho, were almost certain to hand on mental deficiency. He was certain that the public would not tolerate any method other than that of separation of the sexes, which, to be of any value, would have to be permanent, since a temporary separation, such as that at Langho, could only be temporary in its results. Stress was laid on the fact that women were not discharged from Langho because they were cured, but because their term of detention had been completed. Thus the institution could not accept any responsibility for the failures that occurred.

THE HOSPITAL SATURDAY FUND.

The annual report of the Manchester and Salford Hospital Saturday and Convalescent Homes Fund shows that the total amount collected from the work-people during the year 1910 was £7,052, a decrease of about £161 compared with 1909, while the amount from other sources was £114, which is just about half of the previous year, the decrease in the latter being due to two large firms having diverted their collections to the hospitals direct, and also to the omission of two matinée performances given in 1909. The total decrease in the fund is thus about £275. The committee decided to transfer £250 from the reserve fund, and in this way were able to distribute among the medical charities £4,400—the same sum as last year. There has been an increase in the number of new branches enrolled, but the decreased collection is due to the falling off in the amounts contributed by existing branches, the only reason assigned for this being the bad state of trade during the year. It is, however, very doubtful whether this can be accepted as the real reason. There is, in fact, some ground for believing that in the Manchester district there is a gradual alteration in the attitude of the working classes towards the medical charities. There is a distinct idea that a subscription of a penny a week, or even a penny a month, entitles to full hospital treatment whenever required, and the hesitation of the hospitals to accept such an impossible condition has certainly led to the refusal to subscribe on the part of many workpeople.

COUNTRY HOME FOR PHTHISICAL CHILDREN.

Mr. C. C. Grundy of Bury has just presented to the Manchester Education Committee a substantial mansion and outbuildings, with about twenty acres of garden and meadow-land, situated at Higher Summerseat, near Bury, and the Lord Mayor last week received from Mr. Grundy the deed of gift. It is intended that the house should be used as a home for school children suffering from incipient phthisis, where they could have a modified course of school work, while spending much of their time in the open air. The property is about 500 ft. above sea level, and offers facilities for keeping a number of cows for the provision of milk. A beginning may be made with forty or fifty children, though, with some alterations, accommodation could be provided for many more.

LEEDS.

THE LATE LORD AIRED.

BY the death of Lord Airedale, which occurred suddenly in Paris on March 16th, Leeds loses one of its best citizens, and the University of Leeds one of its staunchest supporters. The history of Lord Airedale's life is not a matter for these pages; in its earlier phases it was one of strenuous effort in the development of the extensive engineering enterprise which had been started by his father, politics claimed much of his time and thought, but throughout the whole of his life he seems to have been actuated by a very high sense of public duty and of the higher functions of citizenship. In the different charitable institutions of the city he took the greatest interest, to their funds he was a generous and willing donor, and one of the

last of his public acts was the contribution of a handsome donation to the fund, which is at present being raised, for the infirmary in memory of the late King. Many members of the British Medical Association will remember the cordial way in which he greeted them at Gledhow Hall on the occasion of the annual meeting held in Leeds in the year 1889, when he gave a large garden party, and will recall his speech at the annual dinner of the Association. When the University of Leeds was inaugurated some seven years ago, the occasion was marked by the granting of a certain number of honorary degrees, and that of D.Sc. was conferred on Lord Airedale, or as he then was, on Sir James Kitson. A city is fortunate if from time to time it can number among its citizens such a man. The good he has done will for long live after him, and Leeds will cherish his memory for many years.

Work of Lady Almoners in Leeds.

Some twelve months ago it was decided by the three larger medical charities of Leeds—namely, the Infirmary, the Dispensary, and the Hospital for Women and Children—that the system of associating lady almoners with their work, a system which has been in operation in London, but which had not at that time been tried in the provinces, should be initiated. The institutions were fortunate in securing the services for twelve months of Miss Mudd, whose experience of the work in London has been extensive. During a considerable part of the time Miss Mudd has been at work she has had associated with her three ladies who have become familiar with the work, and who will be able to carry it on and to develop it after her departure. The almoners in a report dealing with the first twelve months state that when beginning work in Leeds they were unacquainted with the social and industrial conditions peculiar to the city, and with the charities to which they could look for help, but that a short experience was sufficient to show that the difficulties were substantially the same as in London, and that while each city has peculiarities of its own, the chief lines of work should be the same. The work has been carried out mainly on the following lines: First, to ascertain the home conditions of those to whom out-patient treatment is granted, and take steps to ensure that the advice given at the hospital can be carried out; secondly, to act as a connecting link between the out-patient department and the many outside charitable and social agencies; and, thirdly, to put a check on the overcrowding of the out-patient departments either by those who are able to pay for the requisite treatment or by those who are too poor to benefit by such treatment, and who therefore can be more suitably treated by the Poor Law authorities. During 1910 nearly 100,000 patients attended in the three out-patient departments concerned. Some of these might have paid but one visit, others might have attended many times. It is true that in some respects the number quoted may convey a wrong impression, for a patient might discontinue treatment and on again presenting himself for the same or another complaint might be entered as a new case; still the fact remains that the numbers are very large—in fact, far too large. It is interesting to note that the almoners attribute this overcrowding of the out-patient rooms to two classes of patients—those, namely, with trivial affections, and those who are chronically on the verge of destitution; and no one who has worked in a large hospital can doubt the accuracy of this opinion. Could those be eliminated to a large extent the work in the department would be of a higher standard and more real good would be done. In the investigation of the home conditions of the patients a large amount of information has been obtained which will be productive of good, and which has already been attended with practical benefit. The almoners report that they have been much impressed by the willingness shown to take advice, although this advice may have to be explained carefully and repeated many times before it is acted upon. There are in Leeds, of course, as there are in all large centres, many charitable agencies with different or in some cases similar aims. Among these may be mentioned the Maternity Hospital, the Babies' Welcomes, of which there are now several, and the different associations for promoting the welfare of older children, such as the Summer Holiday Fund, the Invalid Children's Aid Society, and the Poor Children's Holiday Camp. There is also an active Charity Organization Society. Through the latter, or in some cases directly, patients have been put in relation with the appropriate charity or charities, and much good done with a minimum of abuse. The work thus happily initiated will be carried on by the three ladies who have extended their experience under Miss Mudd's supervision. Hitherto the attempts to limit the abuse of the out-patient department have been limited to the inquiries made by the officer appointed for that purpose. These will probably be continued, but it is anticipated that a large amount of abuse will be brought to an end by the work of the lady almoners, and their efforts will be sympathetically watched by those who are interested in hospital work.

Leeds District Nursing Association.

The annual report of this useful society gives an interesting record of the work done during the past year, and shows that the institution continues to fill an important position among the charities of Leeds. Beginning on a small scale some thirty-two years ago, the organization has steadily grown and has extended the scope of its activities. There are now three superintendents and twenty-four nurses on the staff; of these, twelve are in the Lovell Street Home, six in the Domestic Street Home, Holbeck; three in the Hunslet Home, two at Armley, and one at Kirkstall. Three of the nurses are candidates for the Queen Victoria Roll; these are fully-trained nurses, received for six months into the Lovell Street Home, during which period they are instructed in the routine of district nursing, this being supplemented by lectures on hygiene, sanitation, and the elements of the Poor Law. The association is always willing to undertake new work and to open up new districts, and in January last work was begun in a new district in Wortley and Farnley, to which funds will be given by the local nursing associations. The special feature of the work of the society is the nursing of the sick in their own homes, and it may confidently be said of this charity that there is no abuse such as may easily attend the work of most other charities, no matter how much care may be exercised in their administration. During last year 87,806 visits were paid, and the new cases numbered 3,143. Medical men were assisted in their operations in 246 instances.

An important innovation has been made during the past year to meet the case of those people who cannot afford a private nurse and who do not require the continuous attendance of a nurse. A daily visiting nurse may now be obtained on application at the central home and on payment of a small sum; 1,141 visits have been paid by the nurse who acts in this capacity as part of her duties.

For work of the kind done by this society there is yet a large unsatisfied demand in Leeds. It is certain that an extension of the work would stave off the necessity on the part of many poor people of applying for admission to the already overstrained infirmary, and in many cases saves people from coming on the rates. The charity, therefore, is one which has strong claims on the community. It is a regulation, and a very wise one, that the society will not undertake the care of any one who is not under the supervision of a medical man.

Following the example of the Leeds Association, but quite unconnected with it, there are several other district nursing associations doing excellent work. Among these may be mentioned the Horsforth Society, which has a well-organized home with two nurses. The work is carried on in the same way, and during the year which has just come to an end no fewer than 7,350 visits have been made by the nurses.

LIVERPOOL.

EUGENICS AND THE FEEBLE-MINDED CHILD.

On March 16th, under the auspices of the Eugenics Education Society, an address was delivered by Mr. Damer Harrisson at the School for the Blind, with Sir James Barr in the chair. The subject of the address was "The Eugenic Aspect of the Feeble-minded Child." The meeting was attended by a large and appreciative audience. Mr. Harrisson pointed out that, with the progress of civilization, as opposed to evolution or the survival of the fit, society was to be held responsible for the survival of the unfit, and so of the increase of the feeble-minded. Forgetfulness of natural selection must eventually lead to disaster, especially in national life. He held that the survival of the fittest did not necessarily mean the survival of the best, in the sense of the highest organism, but that which was best suited to the circumstances, good or bad, in which it was placed. Civilized man had proceeded so far in his interference with extra-human nature, and had produced such a special state of things by his rebellion against natural selection, that he must go on and acquire firmer control of the conditions or perish. With every step forward man rendered himself liable to greater and greater penalties, and having emancipated himself from the destructive methods of natural selection had accumulated a new series of dangers and difficulties with which he must incessantly contend. He considered that restrictions in respect of the right to multiply must be imposed on the unfit for the welfare of the community, and especially with respect to the feeble-minded. He pointed out the close association between the feeble-minded and the habitual criminal, and regarded both as transmissible defects, threatening the safety of the nation. It had, he said, become a matter of urgent importance that the State should at an early date deal with this evil, which was becoming an ever-increasing burden upon society. He advocated segregation of the mentally defective during their lives in order to eradicate this growing evil. The lecture was illustrated by a series of lantern slides. Sir James Barr, Dr. R. J. M. Buchanan, the Rev. Mr. Lund, and Mr. Ball also spoke, and a hearty vote of thanks was accorded to Mr. Harrisson for his lecture.

QUEEN VICTORIA NURSING ASSOCIATION.

On March 17th the annual meeting of the Queen Victoria Nursing Association was held in the Town Hall, the Lord Mayor presiding. The report stated that the staff comprised 6 matrons and 62 nurses, and that during the past year 9,955 cases were attended and 257,328 visits paid. The four school nurses, together with the other nurses on the staff, had been able to give about 191,000 attendances to children. The work was much appreciated, and was undoubtedly of real value. A sum of about £5,600 had been subscribed for the proposed Florence Nightingale Home. Expenditure had apparently surpassed income to the extent of between £500 and £600 a year. The Lord Mayor, in moving the adoption of the report, eulogized the institution and its work. Sir Archibald Williamson seconded, and the report was adopted.

BRISTOL.

AN ANTIVIVISECTION DEBATE.

THE HON. STEPHEN COLERIDGE addressed a meeting at the Victoria Rooms on March 7th, under the auspices of the National Antivivisection Society, on the subject of the Research Defence Society, and was replied to by Mr. Stephen Paget. This is the first time that these two gentlemen have met on a platform, and a large number of persons supporting either society's views were present. Both were allotted twenty minutes to speak, questions asked were to be answered by both, and a ten minutes' reply was granted to them. Mr. Stephen Coleridge began by saying that he had been twitted with having done nothing. He claimed he had, as he had given birth to the Research Defence Society, which, as no one had attacked research, was misnamed. His society objected to "torture" of animals, which he defined as pain inflicted upon animals not for their own benefit, and he wanted to know whether Mr. Paget defended that "torture." The Act contained nothing to prevent extreme "torture," and any one who held a licence could inflict it. Parliament recognized this and appointed inspectors, though this inspection was a perfect farce. Inhumanity existed in all classes, and he asked why vivisectors were supposed to be immune from this passion. He failed to see that the cutting up of animals should be the necessary concomitant of a tender heart. There were thousands of animals cut up alive with a knife, and if his audience believed that inoculations were painless they must be gullible creatures. He had never said a word against the medical profession. Antivivisectors took their stand on moral results, and if persons could not learn physiology without torture of animals, they had better go without physiology. Mr. Paget said he supposed Mr. Coleridge did not like to repeat all the abuse he had flung at the Research Defence Society at Oxford and elsewhere that night, for he had hardly spoken on it. The society was founded three years ago to make generally known the truth about experiments on animals, and the great value to mankind of the results that had been obtained by such research. The society had now 4,000 members, and had nothing to do with licences or certificates, and was not founded because the men of science were afraid of the Antivivisection Society, as Mr. Coleridge had stated, but because they were sick to death of the misleading statements, the exaggerated horrors and lurid literature of the Antivivisection Society. Mr. Coleridge had asked if he defended torture, but Mr. Coleridge could not define severe pain. Cancer killed a large number of persons, and he (Mr. Paget) held that it seemed right, ethically and from a Christian point of view, to study the disease on animals. He had no objection to a greater number of inspectors. Mr. Coleridge charged the men of science with cruelty, but, said Mr. Paget, it is the antivivisectors who would withhold antitoxin in diphtheria, refuse to allow the proper study of cancer, and would rob the very animals themselves of the advantages that came from experiments on animals. A large number of questions were asked, and the two speakers replied.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

OBSERVATION WARDS FOR MENTAL CASES.

IN his report to the Edinburgh Parish Council, Dr. W. L. Martin, certifying physician in lunacy to the council, said that the number of cases admitted to the observation ward during the year, the high percentage (67.7) of cases "recovered" and "improved," the low percentage of cases ultimately requiring certification, and the low percentage of deaths, spoke for the highly satisfactory results of the work done in the observation ward during the year. Notwithstanding the insufficiency of the accommodation, the observation ward had been doing good work (1) in securing early treatment for patients suffering from temporary mental disorder and the milder and incipient forms of insanity; (2) in increasing early recovery by inducing patients and their friends to have recourse to treatment before the mental disorder had become confirmed; and (3) in saving a certain number of worthy citizens from the asylum stigma, and thus admitting of their return on recovery to their civil duties. The accommodation, however, was quite insufficient. This ought to be remedied without delay. A mental observation hospital was needed, and it would be of great value to the community, as well as a beneficent undertaking.

MUSSELBURGH, MUSSELS, TYPHOID FEVER, AND CONSUMPTION.

In his annual report to the Local Government Board for Scotland, Dr. J. H. Horsburgh, medical officer of health for the burgh of Musselburgh, said that there had been a marked decrease in the number of typhoid cases notified since the notices warning people not to eat shellfish gathered on the shore had been put out. As regards pulmonary tuberculosis, a system of voluntary notification was in force, whereby the local authority had offered periodical disinfection of houses, but this offer was not being taken advantage of. The medical officer thought that it would be a benefit to the community if some form of compulsory notification were adopted, say for five years, whereby the local authority would obtain powers to disinfect at intervals infected houses. The number of children who had not been vaccinated had been increasing yearly. Last year the number was 80, so there was in the burgh a large number of children not protected by vaccination from small-pox—a standing danger to the community.

AN ASSOCIATION OF SCHOOL MEDICAL OFFICERS.

An Association of School Medical Officers for Scotland has recently been formed. The first meeting will be held on Saturday, April 8th, at 11.30 a.m., in the offices of the Govan Parish School Board, 151, Bath Street, Glasgow. All medical officers connected with schools in Scotland are invited to be present. The first President is Dr. Ernest T. Roberts, Principal Medical Officer to the Glasgow School Board, and the Honorary Secretary is Dr. J. King Patrick, County Buildings, Ayr.

GESTO HOSPITAL, EDINBANE, SKYE.

The trustees of the Gesto Hospital, Edinbane, Isle of Skye, are seeking to obtain a resident medical officer for that institution. We have received from a correspondent a statement, printed as a leaflet, dated Portree, March 11th, 1911, setting out the conditions of the appointment. It contains the following statement with reference to private and consulting practice: "The trustees, in making the appointment, allow private and consulting practice in the district, and provide that it shall be followed." We have received from a well-informed correspondent in the North of Scotland the following note:

> Intending applicants should inquire carefully into the question of private practice; this is said in the advertisement to "be allowed." My information is that the trustees make it obligatory on the resident to attend all crofters who may wish to be visited at their homes, the consequence being that very few, if any, pay any fees, not even the expenses which are incurred in making these visits. If the resident refuses to give his services then a complaint is lodged with the trustees. Another point is that the sanitation and water supply of both the hospital and resident's house are unsatisfactory, and although this has been reported to the trustees nothing has been done to remedy the defects. The resident's house requires a thorough overhauling, fresh paper and paint being very much wanted, while the furniture is worn out and somewhat scanty. The number of beds in the hospital is ten, although the secretary states in a circular which is being issued to intending candidates that each of the two wards is capable of containing six or seven beds. It would be well if intending candidates would write for particulars of the appointment to any past resident, or even to the present resident, who I have no doubt would be quite willing to give his experience in connexion with the work expected to be done.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

IRISH MEDICAL ASSOCIATION.

THE Cork Branch of the Irish Medical Association has invited the association to hold its annual meeting in that city on June 13th and the two following days. It is twelve years since the last meeting was held in Cork, and no pains are being spared to make the meeting a success. Already some twenty new members have joined the association. The annual meeting will take place in the examination hall of University College at 3 p.m. Before this, Dr. Cotter, President-elect, and Mrs. Cotter will entertain the members and their lady friends at luncheon. After the annual meeting Dr. Windle, president of the college, will conduct members through the different departments, and he and Mrs. Windle will entertain the visitors at tea. The annual banquet will be held in the evening at the Imperial Hotel. On June 14th, by invitation of the County Cork Branch, a steamer excursion will be made round the harbour. At Queenstown the party will be entertained at tea by the Royal Cork Yacht Club. In the evening the Lord Mayor and Lady Mayoress will hold a reception in the City Hall. A special ladies' committee has been formed to look after the fair sex who grace the proceedings with their presence. On June 15th a golf competition for a gold medal will take place at the Douglas Golf Links between members of the association. Entries must be forwarded to the honorary secretaries, 4, Camden Place, Cork, on or before June 13th. On June 15th there will be a short excursion also to Blarney, and in the afternoon the High Sheriff and Mrs. Beamish will entertain the members and their lady friends at a garden party. Dr. Philip G. Lee, of 26, St. Peter's Hill, Cork, has been made an additional Honorary Secretary, and it is believed that his experience will contribute to make the general meeting a success.

SEAWEED NUISANCE AT BELFAST LOUGH.

The Commissioners appointed to inquire into the methods of treating and disposing of sewage have issued their report on the seaweed nuisance on certain parts of the foreshore of Belfast Lough. In 1909 the Belfast City Council proposed to ask the Local Government Board to sanction a loan of a large sum sufficient to carry out purification works for the sewage of the city. The Local Government Board asked the assistance of the Sewage Commissioners, who undertook the investigation.

For a number of years a very serious nuisance has existed on the banks of the lough, especially on the County Down side, in the neighbourhood of Tillysburn. At first this was put down to the deposit of the town sewage; but, chiefly through the investigations of Professor Letts, the true cause was discovered in the decomposition of seaweed, chiefly the *Ulva latissima*, which collected in enormous quantities on the slob lands and rotted in the summer and autumn sun. It was then said that the sewage pollution of the water caused the excessive growth of this seaweed. Dr. Letts carried out many experiments, and reported that if the effluent sewage were purified to a certain extent before discharge the overgrowth of the *ulva* would cease.

The Commissioners instituted experiments and investigations embracing detailed surveys, float experiments to ascertain set and rate of the currents, dredging and trawling deeper portions for the *ulva*, observations to discover typical nurseries of the weed, chemical and bacteriological analysis of the water and sewage at various points, of the *ulva*, of sludge; investigation into the growth of the *ulva*, fermentative changes; into the effect on the *ulva* of removing mussels from the banks, and on the application of copper sulphate to the banks.

The Commissioners have arrived at the opinion that the nuisance is not mainly caused by the deposition of sewage solids, and that the superabundant growth of the *ulva* can only to a very small extent be due to the sewage solids; the sewage should be freed from the greater portion of its suspended solids, but they doubt the possibility of purifying it bacteriologically as to render uncooked shellfish from the sloblands a safe article of diet.

They point out that *ulva* is growing only in certain districts of the lough; that it is found where the sea water is free from sewage; that its growth depends on the presence of sheltered and shallow waters with sluggish currents, and the existence of means of anchorage for the weed. At Crossness, in the estuary of the Thames, although there is an enormous discharge of the precipitation liquor from London sewage, no *ulva* is found. It grows best when attached to some fixed anchorage, but is easily detached; there was an inconsiderable quantity only in deep water. The greatest abundance was found on

banks uncovered at low tide and sheltered from strong currents and rough water. Considerable areas of these sloblands are more or less thickly covered with mussel beds. In several places the weight of the wet *ulva* was 100 lb. to the square yard; the total quantity growing was more than sufficient to account for the quantity of detached fronds cast up on the foreshore. Both Poole and Southampton waters furnish illustrations of the effect of anchorage on the growth of the weed; the mussel fed the *ulva* by the ammonia of its excretions, and the *ulva* helped to purify the foul water in which the mussel grew. Experiments made by Professor Letts suggested that mussels would travel some way to the *ulva*, and attached itself by its threads.

Elaborate experiments were made on the effect on the growth of the *ulva* in sea water mixed with varying proportions of (*a*) tap water, (*b*) sewage, (*c*) purified sewage effluent, and (*d*) sewage and tap water. Although some results were conflicting, on the whole it appeared that the addition of nitrogen in any form was apt to produce rapid increase. Dry *ulva*, taken from pure sea water, had a percentage of nitrogen as low as 1.13 (Durlston, Dorset); the mean of twelve samples from Belfast Lough was 3.92. Although the nuisance from the decomposing *ulva* is due to the liberation of sulphuretted hydrogen, yet the amount of sulphur in *ulva* growing in pure sea water is practically the same as that growing in polluted waters. Given similar conditions of decay, the *ulva* from Durlston would be as capable of producing as serious a nuisance as that from Belfast Lough.

An experiment on the effect of sulphate of copper was tried on a small scale. The effects were so marked that the Corporation of Belfast tried it over a considerable area. The conclusions were as follows:

1. The weeds were almost completely destroyed in a week by the distribution of the crystals at the rate of 1½ cwt. per acre, but the effect only lasted two months.
2. But by destroying the weed, and to some extent the mussels, it assists in the actual cleansing of the banks. The decomposing mussels give rise to some nuisance; they also constitute the food of some marketable fish, and the salt of copper is also poisonous to these fish.

The ultimate remedy is reclamation of the affected lands, and, pending the final solution, cleansing the foreshore, removing the mussels, and the occasional use in suitable localities of sulphate of copper are recommended.

The Commissioners also recommend that the whole sewage of the town should be brought to one outfall at the northern side of the river; that not less than three times the dry-weather flow should be passed through sedimentation tanks; that a properly constructed culvert should be provided to deliver the effluent during the first three and a half hours of the ebb. There should be no delay in freeing the sewage of its bulk of suspended solids, to prevent the silting up of the navigable channels and the deoxygenation of the water.

PHILANTHROPIC REFORM ASSOCIATION.

The Right Hon. T. W. Russell, who presided at the annual meeting of this association, made an important speech on the subject of Poor Law reform. He stated that he did not agree with those who wished to break up the workhouse system, and in his opinion the proposals of the much-talked-of Minority Report would delay rather than advance reform. He preferred an attempt to create a tolerable workhouse system out of existing materials. Children should not be admitted to workhouses at all, but should be boarded-out in families. The boarding-out system was carried out by the Orphan Society of the Presbyterian Church with much success. As regards the feeble-minded and sane epileptics, he thought that by administrative reform a certain number of workhouses could be cleared of their ordinary inmates and set aside as auxiliary asylums or workhouses for these poor sufferers. Such a step would be facilitated by the Old Age Pensions Act, which would largely diminish the number of ordinary workhouse inmates. Tramps, he thought, should be specially dealt with, while the sick should be treated in an infirmary and not a workhouse. Mr. Russell's views have excited much interest in Dublin, more especially as of late so much has been said in favour of the Minority Report referred to, and so little on the other side.

DUBLIN SANITARY ASSOCIATION.

The work done by this association during the past year has been most satisfactory. The condition of the primary schools in Ireland has continued to occupy its attention, and strong representations have on several occasions been made to the Commissioners of National Education regarding the insanitary condition of many of the buildings and the importance of establishing regular medical inspection of the school children. Much time also has been devoted to the subject of vaccination in consequence of the anti-vaccination campaign in Wexford. In Dublin itself the extension of the main drainage scheme, the importance of regular watering of the streets, and many other matters of minor importance have been dealt with.

STEWART INSTITUTION FOR IMBECILE CHILDREN.

This is the only institution in Ireland devoted to the care and instruction of imbecile children. It receives both free and paying patients from all parts of the country. During the last year the average number in the home was 122, including 70 boys and 52 girls. The boys are employed at weaving, mat-making, carpentry, and farm work, and instruction is also given in the working of the loom. Three deaths occurred during the year, two of which were from pulmonary tuberculosis.

THE CENSUS.

Active steps are now being taken to facilitate the work of the Census. Pattern tables have been issued with instructions and examples of the method in which the forms are to be filled up. In addition, the Registrar-General delivered an address on "The Development of the Irish Census and its National Importance" at a recent meeting of the Statistical Enquiry Society of Ireland. The address contained much valuable information concerning the importance of an enumeration of the population from a sociological point of view.

New South Wales.

[*FROM OUR SPECIAL CORRESPONDENT.*]

LUNACY IN 1909.

THE annual report for the year 1909 of Dr. Eric Sinclair, Inspector-General of the Insane for New South Wales, shows that on December 31st, 1908, the total number on the register was 5,705, and on the corresponding date of 1909 it was 5,934, giving an increase for the year of 229, as compared with 98 for the preceding year, or with the increase of 82 for 1907. The increases of these two years, however, were unusually low, and the increase for 1909 is merely a return to a normal figure, and, Dr. Sinclair says, does not denote any serious increase in the occurrence of insanity. Insanity in this State, he says, does not appear to be increasing in a markedly different proportion to the population. The proportion of registered insane to population in 1909 was 1 in 277, which is about the same as it has been for some years. This steady ratio of insane to population is further borne out by the ratios of admissions to general population, these fluctuating between 1 in 1,585 in 1900 to 1 in 1,538 in 1909, and giving an average for the decennium of 1 in 1,511.

Accommodation.

As in previous years, Dr. Sinclair has to call attention to a considerable shortage in accommodation. The seven hospitals for the insane of the State have a total accommodation for 5,173, whereas the number of patients in these hospitals (statistics of licensed houses not included) was 5,613, giving an excess of

patients over provided accommodation of no less than 440. On December 31st, 1908, there were in the hospitals and licensed houses 5,673 patients, and on December 31st, 1909, there were 5,599. The total number of cases under care during the year was 6,994, and the average number daily resident 5,599.

Admissions.

During the year 881 were admitted for the first time, and 189 readmitted, while 251 were transferred from one institution to another. Of the total number, natives of New South Wales formed 55 per cent.; other Australian States, 9 per cent.; England, 15 per cent.; Ireland, 11 per cent.; Scotland, 4 per cent.; and other countries, 6 per cent.

The total admissions and readmissions were classified according to the forms of mental disorder into: Mania of all kinds, 492; melancholia of all kinds, 258; dementia, 145; general paralysis of the insane, 43; epileptic insanity, 33; and congenital or infantile defect, 99. It will be noted that the general paralytics formed only 4 per cent. of the total admissions.

As to probable causation, alcohol was assigned in 161 or 15 per cent., and venereal disease in 38; diseases of skull and brain and epilepsy in 72; other bodily disorders in 99; childbirth, etc., in 43; bodily trauma in 18; and mental stress in 154. An insane heredity was ascertained in 152, and congenital defect existed in 105, whilst in 135 no cause could be assigned.

Discharges, Deaths, etc.

During the year 402 were discharged as recovered, giving a recovery-rate of the total admissions and readmissions of 37.57, as compared with 40.32 for the ten years ended 1909; also 87 as relieved; 251 were transferred, and 2 escaped. During the year 350 died, giving a death-rate on the average numbers resident of 6.25 per cent., as compared with the average for the preceding ten years of 7.13 per cent. The deaths were due in 153 to cerebro-spinal diseases, including 52 from general paralysis; in 94 to chest diseases; in 38 to abdominal diseases, with only 7 from dysentery and diarrhoea, and in the remainder to general diseases. Of the total deaths, 33, or 9.4 per cent., were due to pulmonary consumption; also 6 to suicide and 2 to accident.

Reception Houses.

There are two reception houses in the Colony, one at Darlinghurst and the other at Newcastle. These institutions do valuable work both to the patients and for the asylums they relieve. Patients with slight and brief attacks are treated there till recovery, and in many cases certification is avoided. Naturally many of these cases are of alcoholic origin. An experiment is being tried, Dr. Sinclair says, in an attempt to extend the privileges of the reception houses to certain of the country towns, by gazetting a room at the local gaol as a reception house. As might have been, and probably was, expected, the experiment has not proved of much advantage. In any case, for want of any other place to send them, the patients in many country districts go to the gaol. Unfortunately the county hospitals, as a whole, refuse to admit these cases.

A return furnished by Dr. Sinclair shows that there were 297 such cases detained in gaols "for observation on account of supposed insanity" during the year. Of these, 87 were certified and sent to asylums, 192 were found not insane and were discharged, and 18 remained in the gaols under observation at the end of the year.

At the reception houses proper 21 were in residence at the beginning of the year, and 1,072 were admitted during the year. During the year 38 were discharged recovered by certificate, and 438 from the police-court; 397 were sent to the police-court and returned to the reception house under certificate, 182 were transferred to hospitals for the insane or to licensed houses, and 22 died. At the end of the year 16 remained in the reception houses.

Criminal Insane.

The hospital for the criminal insane is a separate building, attached to the Paramatta Hospital for the Insane. It is reported to be entirely unsuitable and out of date. During the year 15 were certified to be insane whilst awaiting trial, 4 were found insane by jury on arraignment, 24 were acquitted on the grounds of insanity, and 18 were certified as insane while serving sentence. At both Paramatta and Darlinghurst gaols there are observation wards for prisoners suspected of insanity, and to these wards 143 were admitted during the year; 15 were discharged as of sound mind, 10 to hospitals for the insane, 117 to police-courts, and 15 remained at the end of the year.

Cost.

The weekly cost per patient was 11s. 8¾d., or, after deducting collections, 9s. 6¼d.

Proposed Legal Amendments.

It is hoped that at an early date certain alterations in the Lunacy Act may be made. The principal are the following: Provision for the admission of voluntary patients to hospitals for the insane and licensed houses; provision for placing on a proper footing the treatment of uncertified insane patients in private houses; provision for facilitating admissions to the reception house, the granting of absence on leave from hospitals for the insane, and also a number of amendments as to legal procedure for making more secure the control over patients' property by the Master in Lunacy.

Cape of Good Hope.

[*FROM OUR SPECIAL CORRESPONDENT.*]

HEALTH OF CAPETOWN.

THE annual report of the medical officer of health, Dr. Jasper Anderson, for the year ending June 30th, 1910, states that the population was last enumerated in April, 1904, and since then has undoubtedly decreased. For the purposes of the report the population is estimated at 66,550—namely, 34,300 Europeans and 32,250 other than Europeans.

Births.

During the year there were 777 births amongst Europeans and 1,615 amongst the coloured population, giving a birth-rate of 22.6 for Europeans and 50.0 for coloured. Illegitimacy increased to 9.50 per cent., a higher rate than has ever been reached.

Deaths.

The deaths which occurred in the city during the year were 454 Europeans, 1,138 coloured, and 1 person whose race was indeterminable. Capetown includes a number of public institutions to which persons suffering from serious illness are admitted from outside the boundaries of the city, so that the totals include deaths not properly belonging thereto; 193 Europeans and 197 coloured persons died in the various institutions in the city during the year; the death-rate among Europeans was 13.23 and among coloured 35.28.

A classification has been made of the deaths occurring in the different months of the year, which shows that the most fatal months for Europeans were July, December, and January, and September and February the least so. For the coloured, April and March were the most fatal, and July the least. As Dr. Anderson remarks, the death-rate amongst infants under 12 months old is an index of the social condition of the population. There were 104.2 deaths per 1,000 European births, and 216.1 deaths per 1,000 coloured births. For all classes the deaths were 179.4 per 1,000 births. The rate for Europeans increased from 89.3, and for coloured from 209.3 in the previous year. With the view of lessening the infantile mortality, the lady sanitary inspector is mainly employed in visiting houses where children have been born, taking notes of the methods of feeding adopted, and any uncleanliness or obvious sanitary defects in the buildings. She at the same time takes the opportunity of explaining to the mother any points as to feeding and hygiene of the infants which may be necessary as the result of her

observations. This work is appreciated by the mothers. One of the causes of the high infantile mortality amongst the coloured population is the difficulty of obtaining prompt medical treatment owing to inability to pay for medical attendance. This delay affects not only the children under 1 year of age, but also all ages, and in infectious diseases and tuberculosis particularly, leads in the first place to dissemination of the diseases, and secondly to the diminution of the chance of recovery.

Local diseases give the largest percentage of deaths, the next being zymotic diseases. Of these the principal are diarrhoea and dysentery; these account for 182 deaths. There was a serious outbreak of measles during the year, with 65 fatal cases. As in most other parts of the empire tuberculosis accounts for a large number of deaths (57 Europeans and 226 coloured). Compulsory notification of phthisis pulmonalis has worked well, 417 cases were notified during the year under review.

Water Supply.

The water supply of Capetown is derived from springs on the north-west of Table Mountain, and the catchment area on the summit thereof. The chemical and bacteriological examinations of the water made during the year showed that the water delivered to the inhabitants is remarkably pure and free from all injurious matter.

Abattoirs.

The public abattoirs in Capetown, as in not a few towns in the United Kingdom, would seem to be in a very unsatisfactory state. The report states that though some improvement has taken place in the private slaughterhouses within the area of the Cape Rural Division there is no adequate inspection of animals before and after slaughter. The medical officer of health has commented adversely on these abattoirs and has made several recommendations to the municipality, but they have not been carried out.

Mosquitos.

During the year an attempt was made to check the prevalence of mosquitos within the city. The catchpits were disinfected and flushed, with the result that the number of mosquitos was diminished in the town.

Meteorology.

From the meteorological table appended we find that the total rainfall amounted to 23.84 in., rain falling on 107 days. The mean temperature of the air in the shade for the year was 58.21° F. with a maximum mean of 70.8° F. and a minimum mean of 53.8° F. The mean barometrical reading for the year was 30.164.

Jamaica.

[*FROM OUR SPECIAL CORRESPONDENT.*]

ANNUAL REPORT OF REGISTRAR-GENERAL.

SOME interesting figures may be gathered from the report of the Registrar-General for the year ending March 31st, 1910.

The population on which the various rates are calculated is estimated at 862,422, or an increase on the previous period of nearly 14,000. The marriage-rate is 4.1, and the registered birth-rate 37.8 per 1,000 of population. The number of deaths registered during the year was 18,636, giving a rate of 21.7 per 1,000 of population, the lowest since 1902–3, when the rate was 19.8. In Jamaica, as elsewhere, the mortality amongst children is high; 5,657, or 30.4 per cent., of the deaths in the year were those of children under 1 year of age, and 8,152, or 43.7 per cent., were of children under 5 years old. That is to say, of every 100 children whose births were registered 17 died under 1 year old and 8 more failed to reach the age of 5 years.

In only 4,353 of the 18,636 deaths was the cause of death medically certified, that is, of every 100 deaths in the year 76.6 were registered without any medical certification of the cause of death. In Kingston, the percentage of uncertified causes of death, 27.1, is very much lower than in any other parish, but if the deaths in the public institutions are eliminated the percentage of uncertified cases is 59.7, which is an exceedingly high rate, though no doubt many of these cases had been medically treated at some stage of the illness.

The principal causes of death in the parish of Kingston were phthsis, malarial fever, diarrhoea, enteric fever, and "ill-defined." Under this head is classed debility, atrophy, inanition, forming a total of 16.0 per 100 of total deaths.

The Registrar-General states that on April 1st, 1909, there were 132 names on the Medical Register, and eleven names were added during the year. One medical practitioner died, and seventeen names were cancelled, the addresses of the owners not being known, leaving 125 names on the Register on March 31st, 1910. There were thirty-eight dental practitioners on the Register on March 31st, 1910.

Special Correspondence.

VIENNA.

Vacant Clinics in Vienna.—A Grant of Six Millions to the Austrian Hospitals.

OF late much interest has been aroused in Vienna by the fact that at the present moment there are two clinics whose chairs are unoccupied. One of these is the chair of the Second Medical Clinic (formerly occupied by Strümpell). This vacancy has been caused by disputes between the Government and the University Senate, the former desiring to nominate a man who would not prove too independent, and who would consequently be easily controlled, whilst the latter was anxious that their candidate should encounter no difficulties in connexion with his scientific requirements. A compromise has been effected, however, and the Government has consented to ratify the choice of the Senate. As is the custom in Austria, the Senate elected as many as three candidates for the vacant post, Sahli of Berne, Chwostek of Vienna, and Ortner of Innsbruck, whose names were sent in for the consideration of the Government. Sahli, however, immediately informed the university authorities that he did not wish to leave his native town. Of the other two candidates Ortner is considered to have the better chances of success. The other vacancy was caused by the sudden death of Escherich, which is likely to prove a serious loss to the scientific school in Vienna. As yet no successor has been nominated, but it seems most probable that he will be succeeded by one of the German pediatrists.

The finances of the State and university hospitals have lately been in a very serious condition, though several attempts have been made to bring some sort of order into the existing chaos. By the death of Baron Rothschild, however, who left over 700 million kronen, the Austrian Government receives some 25 million in death duties, etc., of which about 6 million kronen (or a quarter of a million pounds sterling) must be devoted to the Austrian hospitals. Thanks to this windfall, the hospitals of Austria will be saved from bankruptcy, and various clinics will in addition be properly endowed. It should now be possible to do away with the system of placing the hospitals under the care of the various political parties, and the Government has two whole years in which to think out a substitute for the present deplorable arrangement.

ACCORDING to statistics published in Professor Schwalbe's *Reichs-medizinal-Kalender für Deutschland auf das Jahr 1911*, the total number of medical practitioners in the German Empire in 1910 was 32,449, the total population being 65 millions. As compared with the previous year, the number of doctors showed an increase of 480. In 1901 the number of practitioners was 27,978. The proportion of population has kept nearly at the same level during the period from 1901 to 1910; it has varied from 4.92 to 5.08 per 10,000. It is estimated that the proportion will rise within the next few years, as the number of students matriculated in the medical faculties of Germany in the last semester was 11,125, as against rather under 6,000 in 1905. The number of students has thus nearly doubled in the space of five years.

Correspondence.

TO HELP THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—In your issue of March 18th there appears an appeal from Professor Howard Marsh for increased assistance from the rank and file of the medical profession to this fund. With that appeal all must sympathize. Ladies' guilds, collecting boxes under the control of lady members of our families, and all similar attractive devices for bringing in additional support are in their own way, no doubt, admirable.

But, if I may say so, Professor Howard Marsh has not touched the spot when he makes his proposal. It must be remembered that the medical profession has in the British Medical Association an organization recognized by the Government, the community, and the profession itself competent to deal with all the interests that affect the medical profession as such. Professor Howard Marsh would seem to recognize this by writing to its JOURNAL.

Let the fund and those associated with it seriously consider during the next few months whether it is not possible to make the interests of both come into line, and as a means to this end to offer to the Association seats for directly-elected representatives on all committees of the fund, and at the same time to form through all the Divisions of the Association local committees.

If the committee of the fund can place before the Representative Body of this Association next July a definite offer based on the above suggestions, there is no doubt that the excellent and efficient central and local machinery of the Association could be associated with the experience of the fund in a manner advantageous to all.

It might then be reasonably expected that in a few years one would hear no more of lack of sympathy, as nearly every practitioner, by giving his 5s. a year would, while helping a fund acceptable to all, find himself relieved of many personal anxieties, and at the same time would know that he was assisting those dependent on colleagues who had fallen by the way.—I am, etc.,

Brighton, March 20th. E. ROWLAND FOTHERGILL.

SIR,—In his letter of March 14th the Master of Downing points out a means of raising additional funds by weekly savings to be effected by the wives of general practitioners. Doubtless the shillings and sixpences thus collected would carry a double blessing to the givers and to the takers, but the duty of bringing aid to their less fortunate brethren does not fall upon the general practitioner alone.

Ought not the more successful or more wealthy members of the medical community to provide the funds whereby the wives and daughters of the victims of professional accident or misfortune may be helped to obtain the bare necessaries of life?

The list of subscribers and donors to the fund contains many well-known names, but one looks in vain for many others, equally well known in London and in the large provincial towns—names associated with lucrative practice and generous hospitality towards their professional friends and supporters. As leaders in medical science and practice, their support of the leading medical charity is even more urgently to be desired than that of the overworked and often underpaid practitioner.—I am, etc.,

March 18th. E. C. B.

OSTEO-ARTHRITIS AND ITS RELATION TO CHRONIC RHEUMATISM.

SIR,—The letter of Dr. Kerr Pringle in the JOURNAL of March 11th conveys, in some respects, a mistaken impression regarding my paper on osteo-arthritis. He quotes the words "pyaemic tuberculosis" from your abstract; this is a misprint for "pyaemia, tuberculosis," and I think this is a correction of some importance. Probably by this time he has read my paper in full, as published in the *Proceedings of the Royal Society of Medicine*, and, if so, he will find that we are in agreement as to the main issues which he raises.

There are two points, however, calling for notice. He regards the hypertrophic bony changes as degenerative, whereas I believe them to be compensatory and reparative, though degenerative changes may have been the original cause of the mischief calling for repair; certainly arterio-sclerosis plays an important part in many cases. Further, he invokes an infective factor in chronic villous arthritis. That such a factor is possible or even probable must be admitted, but while such well-marked changes as those of Charcot's disease can occur in the absence of infection, I think that wear and tear or trauma *plus* any condition affecting the nutrition of the joint, such as varicose veins or arterio-sclerosis, are sufficient to account for the majority of those slight cases met with in women at the menopause. The most important thing is to differentiate such cases from rheumatoid arthritis and other definitely infective conditions, and I hope that he will, in common with other members of the Balneological Section, collect careful clinical notes of these cases with a view to future discussion of this question.

As to Dr. Midelton's view that an investigation of the contributory factors other than infection makes the confusion even more marked, is not such investigation an essential step to the comprehension of any group of diseases? I am unable to discover whether he is in favour of, or opposed to, attempts to isolate the specific germ of an infective condition. To advocate identical measures of treatment in joint disorders presenting similar symptoms, without regard to the cause, is hardly consistent with modern methods of treatment.—I am, etc.,

Buxton, March 19th. CHARLES W. BUCKLEY.

WAS IT A CASE OF ANAPHYLAXIS?

SIR,—Dr. Goodall's article in your issue of February 11th on Some Points connected with the Serum Treatment of Diphtheria has interested me acutely, for a reason which will soon appear. But, independently of the personal aspect of the subject, it riveted my attention as the best exposition of that dread catastrophic phenomenon anaphylaxis I have come across. It may have been equally well described by others, but, if so, there must have been gaps in my reading.

At the end of September, 1910, I visited London, having always found a change to its drier atmosphere very beneficial after the moisture of the west coast. The first two days after I arrived I felt the usual improvement, and did a good deal of quiet walking about. On the third day the left knee became rather painful, and this soon went on to slight effusion, very much limiting my movements. Four days from the commencement of the arthritis I was attacked with moderate diarrhoea, which also lasted about four days. Almost as soon as the diarrhoea commenced the arthritis disappeared. About the fifth day from the commencement of the diarrhoea I was seized with violent coryza of influenza type. Immediately this began the diarrhoea ceased. The influenza was most severe, the temperature considerably raised, and much malaise. About the third day of this, being much interested in the inoculation treatment of these catarrhs, and thoroughly dissatisfied with the older methods of treatment, I went to St. Mary's Hospital and introduced myself to Sir Almroth Wright, whose kindness and courtesy I shall always gratefully remember—and laid my case before him. As, of course, there had been no identification of the particular micro-organism responsible for my troubles, at my urgent request he ordered me their "blunderbuss" injection. This is a vaccine made from several of the various microbes etiologically related to such attacks as mine.

No improvement followed, and two days after, the illness passed from the nose to the chest, and the temperature, which had fallen, rose to 102°, with hard cough and heavy lumpy expectoration. The pulse-respiration ratio was about 2½ to 1, and there was a heavily coated tongue, thirst, and total anorexia. After this had lasted a few days I went to St. Mary's again, where a specimen of my sputum was taken, and I received instructions to call in four days. This was on a Tuesday. On Friday I returned with much difficulty, for I was very ill, weak, and dyspnoeal, and had much pain through the left lung. The temperature varied from 101° to 102°, exceptionally going for brief periods to 103°. Cultivation gave an almost pure culture of the pneumococcus. A vaccine had been prepared therefrom, and I received an injection as before in the right flank. This would be about seven or eight days since the first injection.

The injection was made about 3.30 p.m., and by 5 p.m. the temperature had come down to normal, a gentle perspiration replaced the heat and dryness, and I felt hungry.

I had a chop and bread-and-butter and tea, having been quite contented previously with two or three glasses of milk a day. Not long after I began to feel not so well. The temperature rose to 101°, and a severe eruption of nettle rash appeared. For the next two days I kept having returns of this urticaria, the attacks coming about every four hours, and lasting nearly two hours. The eruption was of a most terrific intensity, affecting

the inside of the nose, the conjunctivæ, the auditory meatus, the pharynx, and each time there was an intense feeling of oppression at the epigastrium and some nausea. I restrained with difficulty the desire to vomit. At the same time I had some difficulty of breathing and my throat was sore, and am convinced these symptoms were caused by an urticarial eruption on the gastric and respiratory mucous membranes. My condition was almost serious. I could get little sleep, and the gastric and respiratory symptoms were so severe as to occasion considerable anxiety. The temperature rose again to a little over 101°. On the morning of the third day since the second injection I remembered that I had read an article in the BRITISH MEDICAL JOURNAL by a gentleman who stated that salts of lime were a specific for urticaria. Research discovered some glycerophosphate of calcium, and I had a mixture made containing ʒij in the ʒvj. The first dose I took stopped the urticaria. It made two or three feeble attempts to return, but they aborted. I continued the calcium salt gr. x ter die, and from that time I rapidly convalesced, and in a month was much better than even before I became the victim of this series of painful experiences.

Now I want to know, Was this a case of anaphylaxis, and what will happen if I have another inoculation, as I had intended if I should be attacked with influenza again?

It appears that the arthritis, the diarrhœa, the coryza, and the pneumonia were intimately related to each other. Were they all caused by the pneumococcus?

A very interesting fact in my case is the effect of the calcium salt. When I was at the worst I wrote Sir Almroth Wright, and he replied advising a lime salt, but before I got his advice I was cured.

Is it possible that the anaphylactic predisposition is caused by a deficiency of lime in the blood and tissue? If so, the obvious suggestion is to combine inoculation with the administration of a lime salt—as, for instance, the lactate.

Dr. Goodall's anaphylactic cases were, I think, all caused by antidiphtherial serum, but mine by anti-pneumococcal serum. Probably any vaccine with a horse-serum basis would be liable to cause these untoward effects.—I am, etc.,

Blackpool, March 7th. WM. HARDMAN.

BLEEDING IN CEREBRAL HAEMORRHAGE.

SIR,—In Allbutt's *System of Medicine* (1899), in the article Treatment in Cerebral Haemorrhage, Dr. H. H. Tooth writes:

> Bleeding in cerebral haemorrhage, as in everything else, has passed through a long period of disrepute, brought about by its indiscriminate use. . . . On physiological grounds it is difficult to see that it can do anything but good.

I noticed lately the announcement of the death, at 78 years of age, in the Midlands, of a gentleman to whom I was called at Cap Martin just seven years ago, and found unconscious from a severe attack of cerebral haemorrhage. As Dr. Philip Hensley was staying in Mentone, I asked him to see the patient, and he was strongly of opinion that he would die. The next day he was even worse, so I bled him to 16 oz.. when he became semiconscious, and resisted further interference. He then made a slow but steady improvement, and returned home. Since that time he has taken, as before, an active part in municipal life. His medical man says that he did not die from any return of the cerebral haemorrhage, but from independent causes. I have no doubt that he owed the last seven years of life entirely to opportune bleeding.

In a bad case of dilated heart the best result from any treatment I also obtained by bleeding.

Perhaps our successors will fear fresh cold air as we do bleeding when the folly of the present day indiscriminate advocacy of it is fully revealed. If, however, they swing to the extreme of condemning it altogether, they will miss its obvious utility, as we have that of bleeding, through an unreasoning prejudice.—I am, etc.,

Mentone, Feb. 28th. D. W. SAMWAYS.

ETIOLOGY AND TREATMENT OF ACUTE POLIOMYELITIS.

SIR,—I have read with great interest the papers upon infantile paralysis by Drs. Geo. Parker and Vipond appearing in the JOURNAL for March 18th, especially in view of the theory of Flexner that the infection is conveyed by the naso-pharyngeal mucosa. This theory is mentioned by Dr. Parker, but not by Dr. Vipond.

In the *New York Medical Journal* for December 17th, 1910, there appeared an article upon epidemic poliomyelitis from the pen of Dr. Sohier Bryant, and his observations will, I think, be of interest to readers:

> Eighteen months of careful clinical observation led him to the belief that the disease is infectious and contagious, and that the contagion emanates from the naso-pharyngeal secretions. From observations made in 1898, whilst acting as chief surgeon of the Seventh Army Corps at Savannah, he has concluded that poliomyelitis, with regard to its inception and development, is analogous to epidemic cerebro-spinal meningitis, an outbreak of which occurred among the United States troops. In this epidemic it was observed that the disease always began with naso-pharyngitis, spread chiefly among associated soldiers, and the meningeal affection was transmitted by individuals who showed none but the naso-pharyngeal symptoms. Further, local treatment by mild nasal antiseptics gave good results. Dr. Bryant found that the course of epidemic poliomyelitis in the recent outbreak in America resembled exactly that of the cerebro-spinal meningitis in Savannah. From his observations he concludes that, in epidemic poliomyelitis, as in cerebro-spinal meningitis, lobar pneumonia, true influenza, and diphtheria, the symptoms remote from the naso-pharyngitis are not really pathological entities of the disease itself, but are to be considered in the light of complications.
>
> His treatment of epidemic poliomyelitis has, therefore, consisted of isolation during the whole of the naso-pharyngeal or active stage, mild antiseptic applications by a post-nasal spray, rest in bed, and restricted diet with a maximum amount of potable water. The effects of this treatment he has found to be restriction of the pharyngeal inflammation, rapid recession of the febrile conditions, and apparent prevention of paretic symptoms. He further considers that infantile paralysis should be included among those diseases for which children are excluded from school, and that in times of epidemic poliomyelitis all cases of naso-pharyngitis should be regarded as suspicious and treated promptly.

—I am, etc.,

London, W., March 18th. MACLEOD YEARSLEY.

LADY HEALTH VISITORS OR WOMEN SANITARY INSPECTORS?

SIR,—In the letter of mine which appeared in your issue of March 4th last I ventured to say that the subject was one of great importance to public health departments. This statement appears to be correct, as your own columns have already received communications thereon from Dr. Parkes, the Chairman of the Council of the Royal Sanitary Institute, and from my friend, Professor Bostock Hill, who is also prominent in that institute. They, naturally, are both on the defence. My letter has been quoted in the *Sanitary Record* and other journals interested in hygiene, with comments (in the main) supporting my views. Anyway, I am glad the subject is receiving the attention it merits.

My view, strongly held, is that there is no room on the staff of a public health department for a lady health visitor as distinct from a woman sanitary inspector. Is not the whole ever better than a part?

The regulations of the institute for the health visitors' examination are now before me. No. 4 says:

> Every candidate is required to furnish the Board of Examiners with satisfactory testimonials of *recent* date as to *age*.

The italics are mine. I never had the good fortune to see such a testimonial, nor to be asked to furnish one. The latter, I judge, would be a dangerous task, if dealing with a militant member of the other sex. Regulation No. 5 says:

> The candidate must be able to write legibly, spell correctly, be able to make an outline sketch to scale, read ordinary building plans, and must possess a fair knowledge of arithmetic.

But yet no preliminary test of her general education is made, as it is by the Sanitary Inspectors' Examination Board. Regulation No. 1 says:

> Candidates are required to furnish satisfactory evidence that they have had opportunities of gaining a *practical* knowledge of the subjects set out in the syllabus.

Again the italics are mine. This regulation strikes one as excellent, until one sees on a previous page what kind of evidence the institute is prepared to accept as "satisfactory." The list is certainly varied. Any one of seven qualifications are accepted as evidence of a knowledge of hygiene. Amongst them are: (1) A certificate as midwife; (2) three months' training in a children's hospital, or a general hospital, or a Poor Law infirmary. The one certificate that should be required is not insisted on—

namely, a certificate from a medical officer of health of continuous practical training for not less than three months.

As regards the standard of the health visitor's examination, a gentleman who prepares many candidates for it writes to me: "The standard is not high enough." This is a frank admission from one who ought to be thankful for the same. He also writes: "Exceedingly short courses of more or less disjointed lectures are accepted as sufficient training. This is wrong, as it tends to produce mere cramming."

Whilst I prefer my woman inspector to have a midwife's certificate as an additional qualification, it appals me to find that midwives, with perhaps only three months' training in that subject, are allowed to sit for the examination of health visitor without any further preparation whatever. A three years' hospital-trained nurse is permitted to do the same, and no training in public health work nor any attendance at lectures is required, although her knowledge of infants may be meagre and of the homes of the poor *nil*.

Professor Bostock Hill deems a woman sanitary inspector to be "an anachronism." My opinion is that her utility is only *beginning* to be generally recognized, and for properly trained ones there are good prospects in proportion to the rapidity with which local authorities recognize the great benefits arising from their work under the supervision of the medical officer of health. The professor appears to think that a knowledge of plumbing and drainpipes is also an anachronism, and cannot be included in what he terms "the true meaning of hygienic effort." I maintain, however, that "plumbing and drainpipes" are, and will continue to be, worthy of study by sanitary inspectors, both male and female, so important is the part these things take in domestic life.

Dr. Bostock Hill is wrong in thinking that I wish a woman to supersede a man inspector in my department. I want to get one properly trained to do the work that either her male colleagues cannot do at all, because of their sex, or that for cognate reasons they cannot do half so well. Work amongst lying-in mothers and their infants is only a portion of a woman inspector's work, albeit an important one. I may add that none of my inspectors wears uniform.

Dr. Parkes admits that in practice the duties of women sanitary inspectors differ from those of men. Why, then, does he not urge his institute to hold examinations for them quite distinct from those for men? I agree with paragraph 4 of his letter, provided the letters "in" precede "differently." Reference to Dr. Parkes's letter will make my meaning clear.

I observe also the final statement of Dr. Parkes's letter, that women who have passed the institute's examination for health visitor are no good as sanitary inspectors of a public health department. Local authorities and medical officers of health will kindly note this opinion, for it answers "the question of importance" asked in my first letter to your JOURNAL—namely, "whether the holder of such a certificate is quite the person a medical officer of health could conscientiously recommend." The answer, as will be observed, is in the negative.—I am, etc.,

SIDNEY C. LAWRENCE,
M.O.H. of Edmonton.

London, N., March 19th.

QUALIFIED OPTICIANS.

SIR,—Arguments suffer in common with a good many other things in this life—they do not improve with age. They soon outlive their energy, then they are apt to degenerate. After having served their purpose, wholly or in part, it is best to leave them. With some signs of the vigour of youth still remaining, they are apt to be more helpful in effecting their purpose than when stimulated ineffectually in their declining days, they cease to exist amid scenes which are not peaceful. I do not, therefore, propose to reply to the spirited rejoinder of my friend, Dr. Seymour Taylor, to my last "contribution," save to remark that I am sure that the position which he has assumed in this matter, although entirely untenable from the point of view which I have sought to inculcate, has nevertheless been based upon perfect good faith.—I am, etc.,

PERCY DUNN.

London, W., March 17th.

*** This discussion may now cease.

TUBERCULIN AND TUBERCULIN DISPENSARIES.

DR. R. W. PHILIP (Edinburgh) writes to make a correction of errors of fact as follows:

My attitude towards tuberculin has again been completely misrepresented. Can I do more than say that ever since receiving the first supply of tuberculin from Professor Koch in 1890 I have made regular use of tuberculin, in one form or another, both for diagnosis and treatment, in a great variety of tuberculous cases? There is a further statement in the same letter to the effect that I "claim that the fall of the death-rate from pulmonary tuberculosis in Edinburgh is due to the anti-tuberculosis dispensary in Edinburgh." That this is a misrepresentation of my position in several ways will be clearly seen if you will allow me to quote the *ipsissima verba* of the reference (vide lecture before the International Congress at Washington, 1908). After comparing the mortality from pulmonary tuberculosis in London and in Edinburgh for a period of twenty years (1887–1906), I go on to say:

> The curves are interesting in both cases. They illustrate sufficiently what has been frequently pointed out—namely, the steady improvement in relation to tuberculosis which is in progress in many centres.
>
> In the case of Edinburgh, I think, without straining the point, the curve affords sufficient evidence of the influence exercised on tuberculosis by the institution of organized and co-ordinated effort. In addition to less definite agencies, there has occurred in Edinburgh from 1887 onwards the gradual evolution of an antituberculosis scheme, including the dispensary, with its system of domiciliary visitation, etc., the sanatorium, the hospital for advanced cases, the working colony, and, finally, compulsory notification.
>
> The charts show how, from 1887 onwards, the mortality from tuberculosis has fallen progressively. The Edinburgh fall during the *latter* ten years is especially striking. It is quite out of proportion to that of the precedent ten years, and remarkably more rapid than that shown in the London curve. It seems fair to associate this to some degree with the development of the completer organization.

Dr. JOHN B. HAWES (Boston, U.S.A.) write to inform us that there have been at least three tuberculin dispensaries at work in the United States for the past five or six years—namely, at the Johns Hopkins Hospital under Dr. Louis Hamman, in New York under Dr. James Miller, and in Boston, at the Massachusetts General Hospital, under his own care. He continues as follows:

> Such dispensaries are intended not to replace, but to supplement, the work of the sanatorium, the patients being treated with tuberculin and kept under observation during the interval before they can be sent to an institution, and, of still more importance, after they have been discharged from the hospital and are going back to their regular work.
>
> The use of tuberculin in dispensary patients, where it is in careful and skilled hands, has met with distinct success. I have yet to hear of any instance where any unfavourable incidents have occurred which could be attributed to the fact that the patients were not under strict supervision of the sanatorium all the time. My own work at the Massachusetts General Hospital has been under the constant supervision of Dr. Edward L. Trudeau of Saranac Lake, who has watched this experiment with interest. He has provided me with tuberculin (bouillon filtrate) and his invaluable advice.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE electors to the Radcliffe Travelling Fellowship have reported to the Vice-Chancellor that they have elected Mr. E. P. Poulton, B.M., Balliol College.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.B.—A. E. Stansfeld.
M.C.—S. Gordon.
M.B., B.C.—G. G. Bulter, J. H. Crofton, W. H. Hodgson, J. B. Ronaldson, C. J. Stocker, W. W. C. Topley, W. E. Wallis.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on February 22nd.

Physiological Laboratory.

Sir Lauder Brunton was re-elected Chairman of the Physiological Laboratory Committee for 1911, and Dr. A. D. Waller and Dr. Mears were re-elected respectively Director and Treasurer of the Physiological Laboratory for 1911.

The annual report of the Physiological Laboratory Committee

was presented. Under the head of general and physical physiology the report stated that the two committees appointed by the British Association, under the chairmanship of Dr. Waller, to investigate respectively the action of anæsthetics on animals and electromotive phenomena in plants, had continued their work during the year. In the department of experimental psychology Miss G. W. Martyn, B.Sc., continued her research on fatigue, having supplemented her laboratory experiments by experiments on children in elementary and secondary schools and on college students. The department of chemical physiology initiated in 1905 had worked very satisfactorily under the supervision of Mr. J. A. Gardner, M.A. Under the direction of Dr. F. L. Golla there had been started during the year a department of chemical pathology and pharmacology, which was working in close touch with St. George's Hospital.

Appointments.

Professor H. C. Maudsley, M.D., F.R.C.S., has been appointed as representative of the university at the ninth session of the Australasian Medical Congress to be held at Sydney, N.S.W., in September, 1911.

The Principal (Dr. H. A. Miers) and Dr. A. D. Waller have been reappointed governors of the Imperial College of Science and Technology for 1911–15, and Dr. J. F. Nicholson was reappointed a governor of Hymers College, Hull.

University Studentship in Physiology.

A university studentship in physiology, of the value of £50 for one year, will be awarded to a student qualified to undertake research in physiology, and will be tenable in a physiological laboratory of the university or of a school of the university. Applications must be received by the Principal on or before May 31st, 1911.

INTER-COLLEGIATE SCHOLARSHIPS BOARD.

THE London Inter-Collegiate Scholarships Board announces that an examination will be held on May 9th for eighteen entrance scholarships and exhibitions of an aggregate total value of about £1,500, open to men and women, and tenable in the Faculties of Arts, Science, and Engineering of University College, King's College, and the East London College.

Particulars and entry forms may be obtained from the Secretary of the Board, Mr. A. E. G. Attoe, University College, W.C.

UNIVERSITY OF EDINBURGH.

University Court.

AT a meeting on March 13th, a letter from the treasurer of the Crum Brown Presentation Fund was read, intimating that the contributors had resolved to hand over to the University Court for the purpose of awarding annually a silver medal in the Chemistry Department the surplus on the fund, amounting to £39 6s. 3d. The Court accepted the donation with thanks.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FIRST FELLOWSHIP.—E. Connell, C. Cooper, H. A. S. Deane, T. W. Harley, Captain I.M.S., A. Humphreys, J. C. Khambatta, T. J. R. Maguire, and J. C. Sproule.

FINAL FELLOWSHIP.—L. L. Cassidy, R. V. Slattery.

Medico-Legal.

LIBELS ON A MEDICAL PRACTITIONER.

AT Trowbridge, Ellen Chapman, cook, residing near Devizes, was charged on a warrant with publishing a defamatory libel on Dr. James Pearse, one of the surgeons to the Cottage Hospital, and also Medical Officer of Health. The prosecution was undertaken by the Medical Defence Union, and Mr. Walter Taylor of Bristol informed the bench that the libels had been going on for the last two or three years. In 1904 defendant was treated at the Trowbridge Hospital by Dr. Wise. The defendant appeared to be suffering from some hallucination concerning Dr. Pearse, and in 1909 commenced to send letters and postcards to the rector, Mrs. Bond, wife of Dr. Bond, and prominent tradesmen, making allegations against Dr. Pearse as to his conduct to her in hospital.

Giving evidence on oath, Dr. Pearse said he had never seen the woman before that day, and had never attended her. When asked if she had any questions to ask Dr. Pearse, defendant said he was a liar.

Sergeant Read, of Market Lavington, spoke to arresting the defendant in Bristol on Tuesday night. Some months ago he told her if she did not stop sending the postcards she would get herself into serious trouble. She then said Dr. Pearse was a brute, and had tried to murder her when she was in the hospital.

On oath, the defendant gave an account of what she alleged took place in the hospital, from the consequences of which she said she had suffered ever since. She did not deny writing the postcards, and declared that every word written was true.

The defendant was committed for trial at Wilts assizes.

QUESTION OF ASSISTANCE AT *POST-MORTEM* EXAMINATIONS.

BEFORE giving evidence in a case at Deptford Coroner's Court on March 21st Dr. Burney, Divisional Surgeon of Police, said: Before taking the oath I would like to make a protest against the annoyance and indignity to which the medical men of this district are subjected in making *post-mortem* examinations at this mortuary. Before making an autopsy in this case I was informed by the mortuary-keeper that he had been forbidden by the Deptford Borough Council, his employers, to assist in even the most menial duties in an examination. I have performed *post-mortem* examinations in all parts of London during the past fifteen years, but I have never yet experienced the annoyance and indignity to which I was subjected when making the examination in this case.

The Coroner: You received no assistance from the mortuary-keeper? The Doctor: None whatever. I take it that the doctor is not supposed to do the toilet of the dead. Up to the present case I have always had the assistance of the keeper.

The Coroner: I quite sympathize with you in your difficulty. You have to make your examination and determine the cause of death in order to give it in evidence, and I consider that no obstacles should be placed in your way. In all the other districts the mortuary-keeper gives his assistance, in washing the body, etc., but the Deptford Borough Council have forbidden the present keeper to follow the custom in view of the fact that his predecessor met his death by blood poisoning, which he contracted from a corpse suffering from this malady. Substantial damages had been won by the widow, and the council had decided not to risk another such fatality. I should suggest that the medical men of the district should make a representation to the Deptford Council on this subject.

WORKMEN'S COMPENSATION.

Delay in Submitting to Medical Examination.

IN Boyle *v.* Gibb and Son (*Scotsman*, February 26th) the Court of Session had before it the case of a workman who on May 11th, 1910, was asked to submit himself for examination, but it was not until August 1st that his agents undertook that he would do so. The Lord Justice Clerk said that where an employer intimated that he was prepared to pay compensation under the Act, and called upon the workman to submit himself to medical examination, any unnecessary delay on the part of the workman in submitting himself to medical examination would cut him off from compensation during the delay. The Court accordingly refused to allow compensation for the period in question.

Accident to a Diseased Man.

In Hart *v.* Swan, Hunter and Richardson (Newcastle, February 25th) a claim was made by John Evans, a holder up, who received an injury through over-reaching himself while sitting astride a plank at his work in August, 1910. A few weeks after the accident he was operated upon at the Royal Infirmary, and the operation appeared to be successful. Shortly after, however, the man was found to be tuberculous, and the injury restarted in an aggravated form. Counsel for the applicant cited the decision of the Lords, who held that if something happened to a man whilst at work, however diseased he might be, it was an accident within the meaning of the Act. Medical evidence was given to the effect that the applicant was suffering from tuberculosis and from two hernias which, it was admitted, might conceivably have existed before the accident. His Honour agreed that there were elements in the case which pointed to an accident, but having regard to his conscience he could not say that the injuries were due to such an accident. The application was accordingly dismissed.

A CORRESPONDENT who has been requested by large employers of labour to act as their medical adviser in cases for compensation, especially those such as are likely to go into court, asks what would be a suitable scale of fees.

*** Our correspondent would probably find the scale of fees provided by the Home Office for medical referees under the Workmen's Compensation Act a good guide.

COMMISSION.

A LEGAL correspondent writes: The proposal embodied in the circular recently commented on in the BRITISH MEDICAL JOURNAL appears to come dangerously near an offence under the Prevention of Corruption Act, 1906. Section 1 (1) of that Act (taking the material part) provides that "If any person corruptly . . . offers any . . . consideration to any agent as an inducement . . . for doing . . . any act in relation to the principal's affairs or business or for showing . . . favour . . . to any person in relation to his principal's affairs or business . . . he shall be guilty of a misdemeanour." The expression "agent" as used in the Act includes "any person employed by or acting for another." The terms of the circular appear to amount to an offer of a bribe to the doctor (who is the agent) to induce him to persuade the customer (that is the principal) to show favour to the corset maker. The *fiat* of a law officer is necessary before proceedings can be taken under the Act.

Medical News.

DR. E. S. YONGE, Physician to the Manchester Hospital for Consumption and Diseases of the Throat, has been appointed English representative in connexion with the Hay Fever Department of the Scientific Section of the International Hygienic Exhibition to be held at Dresden.

THE net proceeds of the concert given on February 5th by the Vienna Medical Orchestra for the benefit of the family of the late Dr. Richard Franz, whose case was referred to in a leading article published in the BRITISH MEDICAL JOURNAL of March 18th, was about £326.

Mr. H. M. HOLT, M.R.C.S., L.S.A., D.P.H., of Malton, has been admitted an Honorary Associate of the Order of the Hospital of St. John of Jerusalem in England, in recognition of services rendered in connexion with its ambulance department.

UNDER the will of the late Mr. Joseph Thomas of Haverfordwest the University College of Wales receives £1,000 for the foundation of a scholarship, a corresponding sum going to the Pembroke and Haverfordwest Infirmary for the maintenance of a bed.

ARRANGEMENTS have been made for lectures on tropical subjects to be delivered to nurses at the London School of Tropical Medicine, Royal Albert Dock, E. Any qualified nurse may attend the course, whether she intends proceeding abroad or not. Further information may be obtained from the Matron, Seamen's Hospital, Albert Dock, E.

THE fifth International Congress on Thalassotherapy will be held at Kolberg next June (5th to 8th). The Congress is under the patronage of the Grand Duke of Mecklenburg-Schwerin. Communications relative to the Congress should be addressed to Dr. Kaminer, 9 Potsdamerstrasse 1346, Berlin, W.

IN his Harveian Lecture before the society of that name, at 8.30 p.m., on March 30th, Mr. C. B. Lockwood will deal with fractures of the patella and their surgical treatment. The society meets at the Stafford Rooms, Tichborne Street, W.

THE number of medical students in the universities of Austria in the winter semester 1910–11 was 5,319, of whom 247 were women. They were distributed among the several universities as follows: Vienna, 2,410; Innsbruck, 274; Graz, 449; Prague (German), 400; Prague (Tchech), 801; Lemberg, 429; Cracow, 559.

ASSOCIATIONS for the prevention of tuberculosis have been formed in Cuba, Porto Rico, and Trinidad. In Cuba (says the *Medical Record*) the deaths from tuberculosis are more than 40,000 a year, a figure which is relatively nearly three times as high as that in the United States. In Porto Rico the disease annually causes more than 6,000 deaths among one million inhabitants. The conditions in other islands of the West Indies are said to be even worse.

DR. AND MRS. M. J. NOLAN were the recipients, on March 13th, of a number of handsome gifts from the officers and staff of Down Asylum, of which Dr. Nolan has been medical superintendent for the past seventeen years. The occasion was their silver wedding; the gifts included a silver salver and cigarette box, and a pair of antique Sheffield plate candelabra.

AT the annual meeting of the Warneford Hospital, Leamington, Dr. Thursfield, in replying to a vote of thanks to the medical, surgical, and orthopaedic staff for their services, stated that that would be the last occasion on which he would appear at the annual meeting as an active member of the staff of the hospital. On ceasing to be honorary physician after twenty-nine years' service, Dr. Thursfield has been elected honorary consulting physici an, and will thus retain his connexion with the hospital, and be able to serve it on committees and in other ways.

THE dean and staff of the Post-Graduate College, West London Hospital, held a reception on Wednesday, March 15th, which was attended by a large number of medical men from various parts of London. There was an excellent exhibition of pathological objects by Drs. Bernstein, Hare, and Elworthy, a demonstration by Drs. Bernstein and Elworthy, and a lighter kind of entertainment of music and bioscope. The consultation rooms of the outpatient department were appropriately transformed into refreshment rooms. There was an exhibition also of drugs, surgical and other instruments, etc. The Post-Graduate College is to be congratulated on its methods of providing means for social as well as scientific entertainment of its members and their friends. In these days of hurry and continuous endeavour opportunities afforded to the busy practitioner to converse on social and other topics with his colleagues are all too few.

The Services.

ROYAL ARMY MEDICAL CORPS.

A COMPETITION for not fewer than twenty commissions in the Royal Army Medical Corps will be held on July 26th next and following days. Applications to compete should be addressed to the Secretary, War Office, not later than July 17th. The presence of candidates will be required in London from July 24th.

INDIAN MEDICAL SERVICE.

IN a communication from an officer in the Madras branch of the Indian Medical Service we are informed that the annual dinner of the branch which should recently have taken place was abandoned at the last moment owing to a feeling among those responsible for the arrangements that the conditions essential to a successful dinner did not exist. The position indicated is regarded by our correspondent as a by-product of the treatment now extended towards the Indian Medical Service by the Government.

R.A.M.C. (T.F.), GLASGOW.

UNDER the auspices of the Lowland Mounted Brigade Field Ambulance, the last of a series of lectures for officers and non-commissioned officers was delivered in the head quarters at 17, Royal Terrace on March 7th by Lieutenant-Colonel Gordon Hall, R.A.M.C., who dealt with "Tactical Dispositions for Mobile Medical Units." He dwelt on the necessity for a knowledge of tactics, in order that the medical units might be manœuvred to best advantage. During the southern manœuvres the position of a force was on more than one occasion given away by the appearance of the ambulance wagons with their large white covers; a knowledge of the tactical dispositions and their importance on the part of the medical officers would have rendered such a premature disclosure of the plan of operations unnecessary. The various mobile units, their main purposes, and their general dispositions in advance, retreat, attack, and defence were described and illustrated by apt examples from recent campaigns. At the close of the lecture Major Erskine, R.A.M.C., Staff Officer to the A.M.O., Lowland Division, opened an interesting discussion; and Colonel Hall, after replying, was accorded hearty thanks for his lecture.

FIRST SOUTH MIDLAND AMBULANCE SWIMMING CLUB.

THE annual meeting and concert of the First South Midland Field Ambulance Swimming Club was held on March 17th. Lieutenant-Colonel C. Howkins presided over a large company, and amongst others present were Captain F. A. Stephens, Captain G. Craig, Lieutenants Sturrock, McCall, Boeddicker, and E. J. Boome (Honorary Secretary). The Chairman congratulated the swimming club on its prosperous condition, and expressed the hope that every effort would be made by men who were not good swimmers to become so before the proposed camp at Towyn Bay in August. The Rev. F. Gillingham, Vicar of Holy Trinity, Bordesley, a well-known Essex cricketer, presented certificates for proficiency in swimming; he said he was glad to hear that the club had seventy members, and warmly praised the Territorial movement. The concert which followed was most successful, and a thoroughly enjoyable evening was spent.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting of this association was held at 34, Copthall Avenue, E.C., on March 16th. Dr. D. B. Balding presided.

Shoreditch Guardians.

The Honorary Secretary reported that in the matter of the claim of the district medical officers of St. Leonard, Shoreditch, to have their salaries increased on account of increase of work, the Local Government Board had written to the guardians of that parish stating that, in its opinion, some of the salaries were inadequate, and that it was to be hoped that the guardians would see their way to remedy this "in the interests of good administration." There did not seem much prospect of the guardians following this advice, so that it remained to be seen whether the Local Government Board had the power to compel an increase of salary under such circumstances. The Honorary Secretary and Dr. Napper reported that they had attended on behalf of the association the last meeting of the Poor Law conference, and that their recommendations as to Poor Law medical reform had been adopted by that conference with some slight modifications. The Honorary Secretary had also sent a copy of the same to the Local Government Board, with a request that they might be laid before the departmental committee now sitting.

Effect of Old Age Pension Act.

Several letters were considered by the council from country members complaining of the addition to the work of the district medical officer without any extra remuneration, caused by the recent Old Age Pension Acts. In many cases orders were given for attendance on old age pensioners who in the past had been accustomed to pay a private doctor. Before the passing of the Pension Acts the relatives had been willing to assist the pensioners, but now they held aloof, and the burden fell on the district medical officer. The chairman pointed out that it was illegal to place old age pensioners on the permanent list of the district medical officer, and that a special order must be granted in each case. But it was clear that under the present system in many cases these pensioners would have to receive Poor Law medical relief.

Relief Orders and Private Practitioners.

A complaint was received from a private doctor that his certificate was refused by the guardians in the case of a poor patient, who was applying for relief; so that his patient had to be visited by the district medical officer. While recognizing that in some cases this might be a grievance the council felt that there can be no doubt that the guardians were fully justified in their requirement. It was necessary, both for administrative reasons and to safeguard the public purse, that all applicants for relief should at the discretion of the guardians be certified by their own medical officers.

Periodical Publication.

The council then considered a matter that had more than once come before it previously — namely, the need of a closer communication between the executive of the association and the members generally throughout the country. The honorary secretary reported that the editor of the *Medical Officer* had offered to publish monthly a supplement of eight columns for the association similar to the *Jennerian* that was published in the same journal for the Public Vaccinators' Association. After some discussion, it was decided to authorize the honorary secretary to accept the terms offered, subject to some slight modification.

"FIT FOR HUMAN HABITATION."

J. H. G.—It would be impossible to lay down any definite rules to guide a medical officer of health in deciding as to whether any particular house is unfit for human habitation. A house can rarely be condemned on account of a single adverse condition. A sanitary authority expects to be guided by its trained officer in assessing the value of a combination of conditions, which individually might be more or less trivial, but collectively would warrant condemnation. With the exception of the qualified prohibition of back-to-back houses, there is nothing in the Housing, Town Planning, etc., Act, 1909, to guide a medical officer of health in deciding whether a house is "in all respects reasonably fit for human habitation." The grounds for condemnation have been left to the individual judgement of the medical officer of health.

Obituary.

DR. ALOYSIUS O. J. KELLY, a well known physician of Philadelphia, died after a short illness on February 23rd in the 41st year of his age. He was professor in the Woman's Medical College of Pennsylvania, and also held the chair of the theory and practice of medicine in the University of Vermont. Since 1906 he had been editor of the *American Journal of the Medical Sciences*. Dr. Kelly was the author of a treatise on the practice of medicine and was co-editor with Dr. J. H. Musser of a *System of Therapeutics*.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Edward Gamaliel Janeway, sometime Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, New York, one of the leading clinicians in the United States, aged 69; Dr. F. A. Sutor, Professor of Clinical Surgery at Lima, Peru, aged 36; Dr. Friedrich Ernst, sometime Professor and Director of the Medical Policlinic of the University of Zurich, aged 82; Dr. C. von Cauwenberghe, Professor of Obstetrics and Gynaecology in the Medical Faculty of Ghent; Dr. W. F. Sprimon, of Moscow, founder and for thirty years editor of the *Medizinishoje obosrjenige* (Medical Review); Dr. Innocencio Felix Louis Orfila, the oldest *professeur agrégé* of the Paris Faculty of Medicine, nephew of the famous toxicologist, and author of a monograph on the elimination of poisons, and of lectures on toxicology, aged 84; and Dr. Alexis Chavanne, Physician to the Lyons hospitals, and a former Deputy for the Rhône department.

Letters, Notes, and Answers.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PRESCRIPTION OF GLASSES.

R. writes: I have recently seen a lady aged 25, who had not previously worn glasses. She has mixed astigmatism, and, on testing each eye separately, the following were found to be the correcting lenses:

Right: × 3 Sp. − 4.5 cyl. ax. 160.
Left: × 0.5 Sp. − 2.75 cyl. ax. 60.

This combination, however, gives rise to diplopia, the image in the right eye appearing immediately above that in the left. Should I advise the patient to wear the correcting lenses for some weeks, in the hope of the diplopia disappearing, or should I proceed to correct the diplopia with a prism?

*** It is impossible to give a definite answer without knowing a good deal more about the case. The diplopia may be due to the glasses being wrongly centred. Then there is the question as to whether there is any imbalance of the extra-ocular muscles when no glasses are worn. It would be necessary to know what the vision is of the two eyes with and without the glasses. If everything is quite correct and there is no muscle error, it would be quite wrong to use prisms, and the discomfort would be likely to disappear with continued use of the glasses. If, however, there is a muscle error, prisms may do some good, or possibly some operation may be required. To advise on such a case without being in full possession of the facts, and particularly without seeing the patient, would not be possible.

PETROL DUTY.

"SPIRIT" refers to a published statement that a customs duty of 3d. per gallon and an excise duty of 3d. per gallon have been imposed on motor spirit, and inquires whether the proper rebate to medical men should not therefore be 3d. instead of 1½d. per gallon.

*** The customs and excise duties are alternative duties, the former on spirit imported and the latter on spirit manufactured in the country. The proper rebate is 1½d. per gallon.

INCOME TAX.

I. T. inquires (1) whether reduction in income tax may be claimed for accident and sick insurance, and (2) whether in the case of a person residing in his own house the rental value must be added to his other income for assessment, and what deduction, if any, may be claimed in such case.

*** (1) No allowance is made for sick insurance, but an allowance is made for accident insurance to the extent that the premium covers the risk of death. (2) No addition to his return for assessment of profits is required in regard to the rental value of a house owned and occupied by the practitioner, but a proper proportion (not exceeding two-thirds) of the rental value as assessed to income tax may be deducted from the gross receipts as a professional expense under the head of rent. In making a claim for "abatement" or assessment at the lower rate of income-tax, however, the full assessed value on which tax is paid under Schedule A must be shown separately as income from property.

OPERATION FOR DISPLACEABLE PATELLA.

CANTOR writes: A young woman is liable to occasional outward displacement of patella. This brings her to the ground, and is followed by pain and swelling of the joint, lasting some days. She has had it many years, and it is a constant source of anxiety. It has been proposed to split the patellar tendon and pass the outer half of the tendon over the inner half, and fix this outer piece to the front of the tibia inside the still attached inner half. I wish to know, does the transplanted tendon always take root in its new situation, and is this operation really a successful way of dealing with the displacement of the patella, and are any special risks or detrimental sequelae ever met with after this operation?

ANSWERS.

GENERAL PSORIASIS.

DR. H. J. THORP (Ipswich) writes, in reply to "Senex," to suggest the following ointment: ℞ Hyd. am. chlor., gr. xv; liq. carb. deterg. (Wright), ʒj; vaselin. alb., 1 oz. ℞ Salicin, gr. xx, t.d.s.

TEST FOR OCCULT BLOOD.

R.—Weber's test is performed in the following manner: A small quantity of faeces, if not already liquid, is diluted with water and rubbed up in a mortar with 1 to 2 c.cm. of glacial acetic acid 5 to 10 c.cm. of this mixture are then extracted

in a test tube with an equal quantity of ether, the test tube being closed with an indiarubber cork and turned upside down, not shaken, for a few minutes. The ether extract is then decanted off, but if an emulsion has formed it must be filtered and the fluid collected in a test tube; then ten drops of a freshly prepared tincture of guaiacum (as much powdered guaiacum as will go on the point of a knife to about 3 c.cm. of absolute alcohol), and ten drops of oil of turpentine are added. In the presence of mere traces of blood a blue coloration of the ether extract occurs, which may be brought out better by adding water and shaking with chloroform; peroxide of hydrogen solution may be used in the place of oil of turpentine. Meyer's test is not known to us. It is possibly a modification of Weber's, which itself is not new and has to a certain extent been superseded by the benzidine test. There is a good account of the various chemical tests of occult blood on p. 193, vol. v, of Osler and McCrae's *System of Medicine*.

LETTERS, NOTES, ETC.

Nail Biting.

A. B. B.—The case of a girl of 9 who, not content with biting her finger-nails, indulges in the habit of keeping her *toe-nails* bitten well down to the quick, seems worth recording as a curiosity seen recently in my practice.

Tear of the Perineum.

Dr. Philip G. Borrowman (Edinburgh) writes: Referring to Dr. Turnbull's note on this subject in the Journal of March 11th, page 553, it may be of interest to record that a few years ago I was called to see a married woman who had met with an exactly similar accident, except that the cow's horn penetrated her clothes and (*post hoc ergo propter hoc?*) there was no septic poisoning.

The Cause of Appendicitis.

Dr. A. Z. C. Cressy (Wallington, Surrey) writes: Dr. Watson, in the Journal of March 11th, speaks of recent views as "far fetched." To say the least, I think his own views novel. We should none of us like to criticize Nature. I was not aware that the appendix was more abundantly equipped with secreting glands than the caecum, and the impoverished condition of the appendix, so often found due to adhesions, would suggest that its secretive power was not very powerful. Dr. Watson speaks of gravitation; surely for a third of the twenty-four hours the caecum has not this to contend with. I should say that the accumulation of faeces in the caecum would be soft, though probably abundant; neither, as a rule, have I found the appendix dilated except when full of pus, rather the whole wall gets thickened and the lumen often nearly closed. I strongly object to his expression as to the frequency of "he died after an operation for appendicitis." In early operations this very rarely occurs—at least, that is my experience; it is only when purgatives have been given and "delay" has occurred that the operation is likely to be unsuccessful. I think, if there were less procrastination and a keener calculation of the meaning of the early symptoms, we should hear still less frequently that "he died after an operation for appendicitis."

Mr. P. Seymour Price (London, W.) writes as follows on the subject: Dr. Watson says, "We all know that Nature has designed the appendix as a grease cup to lubricate the passage of the faeces up the ascending colon." I, for one, must confess ignorance of the fact, and should be interested to know on what grounds Dr. Watson bases his assertion. Many physiologists have worked upon the subject without being able to assign a definite function to the appendix. Assuming for a moment that the appendix is a "grease cup," and therefore necessary for lubricating purposes, how do the poor patients fare who are robbed of their "automatic lubricator"? Yet they seem happier and better without it. His next assertion is that "any one who has taken the trouble to palpate the colon in thin multiparous women must have noticed the hard accumulation of faeces which fills the ascending colon." Now I take it that most of us have at different times taken the trouble to palpate the ascending colon, not only in thin and multiparous women but also in people of both sexes and all ages, and I do not think our findings will agree with those of Dr. Watson unless marked constipation is present. If Dr. Watson can indeed cure an early case of appendicitis or a case in any stage of inflammation with a mixture of magnesium sulphate, then truly he has more success with his medicinal treatment than falls to the lot of most of us. His final thrust about hearing and reading that "he died after an operation for appendicitis" is amusing, because if he will take the trouble to collect statistics he will be surprised to find that the mortality after operation is under 4 per cent. of all cases.

Society of Infant Consultations.

Dr. Ronald Carter, 11, Leonard Place, Kensington, writes that the honorary secretaries of this society are extremely grateful for the information which they have received from the medical officers of health in various parts of the country. They are anxious to make the list complete, and therefore beg to remind those that have not yet sent their communications that their replies will add greatly to the value of those which have already been received.

A Disclaimer.

Mr. Stephen Paget (London, W.) writes: Mr. Dixon, a Christian Scientist, lately said in the *Saturday Review* that I "declared openly, a few months ago, that there is such a mania for the removal of the appendix." Let me say that I never said anything of the kind, nor wrote it, anywhere. Mr. Dixon is attributing to me what somebody else may have said.

Death from Windstorm.

Dr. F. G. Haworth (Education Department, Health Offices, Darwen) writes with reference to the account given by our Bradford correspondent (page 588) of the death of a child in a windstorm: All of us have at times noticed during a windstorm the small eddies of dust, straw, paper, etc., set up at street corners, and, in a miniature fashion, simulating a cyclone, inasmuch as the direction of the wind has been, like that in its larger prototype, in the direction opposite to that of the hands of a watch. In my opinion the small cyclone was set going by the surroundings induced probably by the hot rays of the sun beating down on a particular spot; the girl, going into the playground quite by accident, stood in the way of the travelling storm until she was exactly in its centre, or, as it is called, the eye of the storm; the air rushes in on every side and that in the centre rushes upwards with great force; this would collect under her dress and round about her legs with such force as to lift her like a waterspout to the full height of itself; then, because the uplifting power of the air is exhausted and the small cyclone passes out of the zone of the girl, she would fall with great force to the ground. I mention this for the sake of accuracy, not that I have any method of preventing a similar accident in the future to offer.

Absent-minded Doctors.

In a play, entitled *Chou Blanc*, recently played in Paris, one of the characters was a hooligan, who, in order to get out of a tight place, passed himself off as a doctor, and went to sleep on the breast of the patient whom he was pretending to auscultate. However improbable this may seem, the thing has actually occurred. About a year before his death Professor Potain was called to a man suffering from severe bronchitis. The physician asked to be left alone with his patient, and proceeded to auscultate his chest, asking him to count aloud. Waiting behind the door for the deliverance of the oracle, the anxious wife was surprised at the length of the consultation, and at last went in to see what was the matter. She found the doctor asleep on the breast of her husband, who was steadily counting, and was well on the way to 500. This reminds one of the doctor who had been dining and was called from a game of cribbage. He tried to count the patient's pulse, and got on well enough till he reached the critical number 15, when he proceeded: "15, 2; 15, 4; one for his nob," and so on. Another instance of a doctor going to sleep in examining a case, though still more unlikely than the story related of Potain, was told to us by one of the parties concerned. As all of them have long since passed away, there is no harm in repeating it. A well-known American physician had been recommended to a famous invalid lady with a warning as to his temper when suddenly aroused—as the French say, *il avait le réveil brutal*. He went to her for the first time when he was tired out. Having to make a vaginal examination, he found the bed too tempting as a resting place for his head and went to sleep in that somewhat abnormal position. The unfortunate lady, who would never allow even her maid to be present on such occasions, remembering the warning she had received, was afraid to move or call for help. How long the doctor's slumbers lasted we do not remember, but we have no doubt that the lady accurately described the situation when she said it was "very awkward." A story is told of a celebrated physician called in to examine Joseph II of Austria. The doctor was either absent-minded or overawed by being brought into such close contact with an Emperor, even in bed. Putting his hand under the bedclothes to feel the patient's pulse, he laid hold, not of the wrist, but of another part of the Imperial person which happened to offer itself to his touch. His Majesty called his attention to the fact in the gracious words: *Erras, amice. Hoc est nostrum Imperiale membrum!* What the physician's feelings were is not recorded. One must, however, admire the tact with which the Emperor dealt with a delicate situation.

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